

# **Site Investigation Findings Report**

## **Tannery Sludge Farm Fields Site**

### **Andrew, Buchanan, Clinton and DeKalb Counties, MO**

### **Order Numbers: 100129004, 100202002, 100203001 and 100211001**

**Site Information:**ESP LDPR Code: FEPA8ESP Staff: Ken Hannon, Sean Counihan, Ben Frissell, & Pam HacklerJob Code: NJ10TSFFInvestigation Date: 1/25 through 1/28, 2010

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**Introduction:**

The Missouri Department of Natural Resources (MDNR) Hazardous Waste Program (HWP) requested Environmental Services Program (ESP) personnel to conduct sampling related to an ongoing investigation involving the Prime Tanning Corporation located at 205 Florence Road in St. Joseph, Missouri. This Findings Report is intended as an interim measure to document recent sampling activities. A full project report will be written by the HWP project manager when sample results have been received and evaluated. ESP Environmental Specialists Ken Hannon, Ben Frissell, Pam Hackler, and Sean Counihan traveled to the site on January 25 through 28, 2010, to collect grab samples of soils and a private well water from selected residences and farm fields where tannery sludge was historically applied as a fertilizer. Additional MDNR personnel on site included Valerie Wilder, Michael Stroh, Hillary Wakefield, Paul Embree, and Shelly Jackson with the HWP, site assessment unit. Ray Franson with the MDNR Kansas City Regional Office was also present to assist. Sampling was conducted in accordance with established standard operating procedures (SOPs) within the MDNR, ESP and outlined in the Tannery Sludge Farm Field Sampling and Analysis Plan (SAP), January 14, 2010.

**Observations:**

Personnel arrived on-site the afternoon of January 25, 2010, and began sampling agricultural field soils. Custody of all samples collected was maintained by ESP personnel. Weather conditions varied but were predominantly cold with temperatures ranging from morning lows of 16 degrees to afternoon highs around 30 degrees Fahrenheit. Winds were heavy to moderate and from the west to northwest, tapering off towards the afternoons. One private well was re-sampled to confirm the sample results obtained from sampling conducted on December 16, 2009, (Residence ID number 102). Eleven residential yard decision units (including one background yard), and 19 farm field decision units were also sampled during this event. No deviations from the SAP were noted at any sample locations. Specific information regarding the owner's names and addresses are not documented in this report due to confidentiality concerns. Names and addresses of residents and property owners are kept on file with the HWP project manager.

**Field Methods:**

Below is a brief discussion of the sampling activities conducted. A more detailed description of sampling procedures is outlined in the SAP.

Residential yards were divided into Sampling Units (SU) according to each specific site location and recorded on specially designed forms that are on file with the HWP project manager. Five-  
aliquot Incremental Samples (IS) were collected from within each SU at a depth of 0-2 inches. All soil samples were brought back to the ESP lab and allowed to thaw and dry for at least three days (some samples took four days to dry). All soil samples were then disaggregated and passed through a #60 mesh (0.25mm) sieve. Second-tier Decision Unit Incremental Samples (DUIS) were created using the Sampling Unit Incremental Samples (SUIS), and then all 60 residential yard IS were placed into sample containers and submitted for hexavalent chromium analysis on February 2, 2010.

Farm field samples were collected from the 0-2 inch depth from three SUs in 19 farm field DUs. Each SU was comprised of an acre plot of land within which ten discrete soil samples were collected. Following drying, disaggregation, and sieving, selected soil samples were then analyzed for total chromium with an x-ray fluorescence (XRF) analyzer. The discrete samples were combined to form first-tier SUIS. Second-tier DUIS samples were then created from the SUIS. All IS were then also analyzed by XRF. The resulting 76 SUIS and DUIS farm field samples were then placed into sample containers and submitted for hexavalent chromium analysis on February 11, 2010.

One private well was sampled, plus a duplicate and a field blank. All water samples were shipped overnight to the contract laboratory for hexavalent chromium analysis the same day they were collected. Water samples were also later submitted to the ESP laboratory for total chromium analysis. Water samples collected for total chromium were preserved with nitric acid while samples collected for hexavalent chromium were first filtered then placed into sample containers and preserved in a buffer solution containing ammonium sulfate.

Table 1 is a listing of the samples collected.

<b>Table 1: Sample Collection Data</b>			
<b>Sample Number</b>	<b>Date Collected</b>	<b>Time Collected</b>	<b>Location Collected &amp; Description</b>
AB14142	1/26/10	1627	Water grab sample collected from residence 102. Clear, colorless and odorless sample.
AB14143	1/26/10	1635	Field Blank.
AB14144	1/26/10	1627	Duplicate of AB14142.
AB14289	1/27/10	1435	Residential soil composite collected from location ID 319 at Y1.
AB14290	1/27/10	1440	Residential soil composite collected from location ID 319 at Y2.
AB14291	1/27/10	1449	Residential soil composite collected from location ID 319 at Y3.
AB14292	1/27/10	1457	Residential soil composite collected from location ID 319 at Y4.
AB14293	1/27/10	-----	DUIS of residential yard 319.
AB14294	1/27/10	1026	Residential soil composite collected from location ID 305 at Y1.
AB14295	1/27/10	1037	Residential soil composite collected from location ID 305 at Y2.
AB14296	1/27/10	1046	Residential soil composite collected from location ID 305 at Y3.
AB14297	1/27/10	-----	DUIS of residential yard 305.

**Table 1: Sample Collection Data**

Sample Number	Date Collected	Time Collected	Location Collected & Description
AB14298	1/26/10	1150	Residential soil composite collected from location ID 320 at Y1.
AB14299	1/26/10	1202	Residential soil composite collected from location ID 320 at Y2.
AB14300	1/26/10	1122	Residential soil composite collected from location ID 320 at Y3.
AB14301	1/26/10	1134	Residential soil composite collected from location ID 320 at Y4.
AB14302	1/26/10	-----	DUIS of residential yard 320.
AB14303	1/26/10	0930	Residential soil composite collected from location ID 325 at Y1.
AB14304	1/26/10	0910	Residential soil composite collected from location ID 325 at Y2.
AB14305	1/26/10	0900	Residential soil composite collected from location ID 325 at Y3.
AB14306	1/26/10	0920	Residential soil composite collected from location ID 325 at Y4.
AB14307	1/26/10	-----	DUIS of residential yard 325.
AB14308	1/26/10	0940	Residential soil composite collected from location ID 326 at Y1.
AB14309	1/26/10	0950	Residential soil composite collected from location ID 326 at Y2.
AB14310	1/26/10	1000	Residential soil composite collected from location ID 326 at Y3.
AB14311	1/26/10	1010	Residential soil composite collected from location ID 326 at Y4.
AB14312	1/26/10	-----	DUIS of residential yard 326.
AB14313	1/27/10	0820	Residential soil composite collected from location ID 312 at Y1.
AB14314	1/27/10	0835	Residential soil composite collected from location ID 312 at Y2.
AB14315	1/26/10	0850	Residential soil composite collected from location ID 312 at Y3.
AB14316	1/26/10	-----	DUIS of residential yard 312.
AB14317	1/26/10	1525	Residential soil composite collected from location ID 313 at Y1.
AB14318	1/26/10	1530	Residential soil composite collected from location ID 313 at Y2.
AB14319	1/26/10	1535	Residential soil composite collected from location ID 313 at Y3.
AB14320	1/26/10	1545	Residential soil composite collected from location ID 313 at Y4.
AB14321	1/26/10	-----	DUIS of residential yard 313.
AB14322	1/27/10	1435	Residential soil composite collected from location ID 301 at Y1.
AB14323	1/27/10	1440	Residential soil composite collected from location ID 301 at Y2.
AB14324	1/27/10	1449	Residential soil composite collected from location ID 301 at Y3.
AB14325	1/27/10	1457	Residential soil composite collected from location ID 301 at Y4.
AB14326	1/27/10	-----	DUIS of residential yard 301.
AB14327	1/27/10	1430	Residential soil composite collected from location ID 304 at Y1.
AB14328	1/27/10	1434	Residential soil composite collected from location ID 304 at Y1, replicate #1.
AB14329	1/27/10	1438	Residential soil composite collected from location ID 304 at Y1, replicate #2.
AB14330	1/27/10	1440	Residential soil composite collected from location ID 304 at Y2.
AB14331	1/27/10	1450	Residential soil composite collected from location ID 304 at Y3.
AB14332	1/27/10	1500	Residential soil composite collected from location ID 304 at Y4.
AB14333	1/27/10	-----	DUIS of residential yard 304.
AB14334	1/27/10	1500	Residential soil composite collected from location ID 303 at Y1.
AB14335	1/27/10	1510	Residential soil composite collected from location ID 303 at Y2.
AB14336	1/27/10	1520	Residential soil composite collected from location ID 303 at Y3.
AB14337	1/27/10	1530	Residential soil composite collected from location ID 303 at Y4.
AB14338	1/27/10	-----	DUIS of residential yard 303.
AB14339	1/27/10	1254	Residential soil composite collected from location ID 306 at Y1.
AB14340	1/27/10	1302	Residential soil composite collected from location ID 306 at Y2.
AB14341	1/27/10	1310	Residential soil composite collected from location ID 306 at Y3.
AB14342	1/27/10	-----	DUIS of residential yard 306.
AB14343	1/26/10	1610	Residential soil composite collected from location ID 302 at Y1.
AB14344	1/26/10	1615	Residential soil composite collected from location ID 302 at Y2.
AB14345	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3.
AB14346	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3, replicate #1

**Table 1: Sample Collection Data**

Sample Number	Date Collected	Time Collected	Location Collected & Description
AB14347	1/26/10	1625	Residential soil composite collected from location ID 302 at Y3. replicate #2
AB14348	1/26/10	-----	DUIS of residential yard 302.
AB14404	1/26/10	1415	Farm field soil location ID 202, SUIS 59.
AB14405	1/26/10	1530	Farm field soil location ID 203, SUIS 18.
AB14406	1/27/10	1256	Farm field soil location ID 204, SUIS 42.
AB14407	1/26/10	1100	Farm field soil location ID 205, SUIS 96.
AB14408	1/25/10	1400	Farm field soil location ID 209, SUIS 109.
AB14409	1/26/10	1200	Farm field soil location ID 210, SUIS 30.
AB14410	1/27/10	0902	Farm field soil location ID 212, SUIS 53.
AB14411	1/26/10	1600	Farm field soil location ID 213, SUIS 44.
AB14412	1/27/10	1118	Farm field soil location ID 214, SUIS 25.
AB14413	1/27/10	1046	Farm field soil location ID 215, SUIS 55.
AB14414	1/26/10	1540	Farm field soil location ID 216, SUIS 50.
AB14415	1/26/10	1245	Farm field soil location ID 217, SUIS 103.
AB14416	1/26/10	0940	Farm field soil location ID218, SUIS 146.
AB14417	1/26/10	0900	Farm field soil location ID 219, SUIS 55.
AB14418	1/25/10	1704	Farm field soil location ID 221, SUIS 150.
AB14419	1/25/10	1658	Farm field soil location ID 222, SUIS 41.
AB14420	1/26/10	1444	Farm field soil location ID 202, SUIS 29.
AB14421	1/26/10	1415	Farm field soil location ID 202, SUIS 79.
*AB14422	1/26/10	1415	Farm field soil location ID 202, DUIS.
AB14423	1/27/10	1530	Farm field soil location ID 203, SUIS 7.
AB14424	1/27/10	1530	Farm field soil location ID 203, SUIS 27.
*AB14425	1/27/10	1530	Farm field soil location ID 203, DUIS.
AB14426	1/27/10	1256	Farm field soil location ID 204, SUIS 99.
AB14427	1/27/10	1350	Farm field soil location ID 204, SUIS 23.
*AB14428	1/27/10	1256	Farm field soil location ID 204, DUIS.
AB14429	1/26/10	1120	Farm field soil location ID 205, SUIS 71.
AB14430	1/26/10	1100	Farm field soil location ID 205, SUIS 34.
AB14431	1/26/10	1100	Farm field soil location ID 205, DUIS.
AB14432	1/25/10	1400	Farm field soil location ID 209, SUIS 138.
AB14433	1/25/10	1405	Farm field soil location ID 209, SUIS 144.
*AB14434	1/25/10	1400	Farm field soil location ID 209, DUIS.
AB14435	1/26/10	1530	Farm field soil location ID 210, SUIS 15.
AB14436	1/26/10	1600	Farm field soil location ID 210, SUIS 62.
*AB14437	1/26/10	150	Farm field soil location ID 210, DUIS.
AB14438	1/27/10	0948	Farm field soil location ID 212, SUIS 16.
AB14439	1/27/10	1030	Farm field soil location ID 212, SUIS 86.
AB14440	1/27/10	0902	Farm field soil location ID 212, DUIS
AB14441	1/26/10	1600	Farm field soil location ID 213, SUIS 9.
AB14442	1/26/10	1626	Farm field soil location ID 213, SUIS 15.
AB14443	1/26/10	1600	Farm field soil location ID 213, DUIS.
AB14444	1/27/10	1118	Farm field soil location ID 214, SUIS 53.
AB14445	1/27/10	1210	Farm field soil location ID 214, SUIS 23.
AB14446	1/27/10	1118	Farm field soil location ID 214, DUIS.
AB14447	1/27/10	1110	Farm field soil location ID 215, SUIS 82.
AB14448	1/27/10	1046	Farm field soil location ID 215, SUIS 110.
AB14449	1/27/10	1046	Farm field soil location ID 215, DUIS.
AB14450	1/26/10	1540	Farm field soil location ID 216, SUIS 32.



Table 1: Sample Collection Data			
Sample Number	Date Collected	Time Collected	Location Collected & Description
AB14451	1/26/10	1603	Farm field soil location ID 216, SUIS 16.
*AB14452	1/26/10	1540	Farm field soil location ID 216, DUIS.
AB14453	1/26/10	1321	Farm field soil location ID 217, SUIS 22.
AB14454	1/26/10	1147	Farm field soil location ID 217, SUIS 50.
AB14455	1/26/10	1245	Farm field soil location ID 217, DUIS.
AB14456	1/26/10	1055	Farm field soil location ID 218, SUIS 102.
AB14457	1/26/10	0940	Farm field soil location ID 218, SUIS 87.
AB14458	1/26/10	0940	Farm field soil location ID 218, DUIS.
AB14459	1/26/10	1255	Farm field soil location ID 219, SUIS 42.
AB14460	1/26/10	0900	Farm field soil location ID 219, SUIS 15.
*AB14461	1/26/10	0900	Farm field soil location ID 219, DUIS.
AB14462	1/25/10	1704	Farm field soil location ID 221, SUIS 164.
AB14463	1/25/10	1730	Farm field soil location ID 221, SUIS 109.
*AB14464	1/25/10	1704	Farm field soil location ID 221, DUIS.
AB14465	1/25/10	1710	Farm field soil location ID 222, SUIS 10.
AB14466	1/25/10	1730	Farm field soil location ID 222, SUIS 27.
*AB14467	1/25/10	1658	Farm field soil location ID 222, DUIS.
AB14468	1/27/10	0940	Farm field soil location ID 224, SUIS 19.
AB14469	1/27/10	0900	Farm field soil location ID 224, SUIS 23.
AB14470	1/27/10	0920	Farm field soil location ID 224, SUIS 74.
*AB14471	1/27/10	0900	Farm field soil location ID 224, DUIS.
AB14472	1/26/10	1210	Farm field soil location ID 223, SUIS 4.
AB14473	1/26/10	1240	Farm field soil location ID 223, SUIS 28.
AB14474	1/26/10	1210	Farm field soil location ID 223, DUIS.
AB14475	1/26/10	1650	Farm field soil location ID 225, SUIS 60.
AB14476	1/26/10	1120	Farm field soil location ID 225, SUIS 8.
AB14477	1/26/10	1020	Farm field soil location ID 225, DUIS.
AB14478	1/26/10	1322	Farm field soil location ID 223, SUIS 44.
AB14479	1/26/10	1020	Farm field soil location ID 225, SUIS 32.
AB14350	1/26/10	1057	Farm field soil location ID 218, SU 102.02.
AB14351	1/26/10	0946	Farm field soil location ID 218, SU 87.04.
AB14352	1/26/10	1200	Farm field soil location ID 202, SU 59.09.
AB14353	1/26/10	1150	Farm field soil location ID 202, SU 59.07.
AB14354	1/26/10	1310	Farm field soil location ID 202, SU 79.03.
AB14355	1/26/10	1330	Farm field soil location ID 218, SU 146.08.

\* Denotes samples that were held at the request of HWP for possible later analysis. These samples will not appear in the analytical results section of this report.

Submitted by:

*Kenneth Hannon*

Kenneth Hannon  
Environmental Specialist  
Field Services Unit  
Environmental Services Program

Approved by:

*Eric Sappington*

Digitally signed by Eric  
Sappington  
DN: cn=Eric Sappington, c=US,  
o=Environmental Services  
Program, ou=Department of  
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sappington@dnr.mo.gov  
Date: 2010.03.25 10:25:19  
-05'00'

Eric Sappington  
Unit Chief  
Field Services Unit  
Environmental Services Program

ES:khd

c: Michael Stroh, Environmental Specialist, HWP

## **APPENDIX A**

### **Chain of Custody/Analytical Results**

Tannery Sludge Farm Fields Site  
Andrew, Buchanan, Clinton and DeKalb Counties, MO



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: 100211001

<b>Collector's Name:</b> (Please Print) <u>Ken Hannon</u> <b>Affiliation:</b> (circle one) <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP DGLS HWP Other:							<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ x Hand Delivered _____ No. Of Containers: <u>8</u>					
Sample Number	Sample Collected	Analyses					Sample Type	For Lab Use Only				
								<b>Matrix</b>	<b>Container</b>		<b>Preserved</b>	
1000354 (Sample A)	Date:	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)					Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
	1-26-10							Soil	Cubitainer		HNO <sub>3</sub>	
For Lab Use Only AB14404	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH	
	1415							Sludge	8 oz glass	1L	HCL	
1000355 (Sample B)	Date:	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)					Grab x Composite Modified	Other:	VOA vial	500mL	24°C (None)	
	1-26-10							Encore	250mL	Disinfected		
For Lab Use Only AB14405	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	2.10 L		Other	
	1530											
1000356 (Sample C)	Date:	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)					Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
	1-27-10							Soil	Cubitainer		HNO <sub>3</sub>	
For Lab Use Only AB14406	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH	
	1256							Sludge	8 oz glass	1L	HCL	
1000357 (Sample D)	Date:	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)  RUN LAB DUP (r6+ only)					Grab x Composite Modified	Other:	VOA vial	500mL	24°C (None)	
	1-26-10							Encore	250mL	Disinfected		
For Lab Use Only AB14407	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	2.10 L		Other	
	1100											
Relinquished By: <u>Kenneth Hannon</u>							Received By: <u>Mark Hampton</u>	Date: <u>2-11-10</u>	Time: <u>1058</u>			
Relinquished By:							Received By:	Date:	Time:			
Relinquished By:							Received By:	Date:	Time:			

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	59 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	202	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	18 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	203 #	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	42 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	204 <del>SUIS</del> MS	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	MS 96 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	205 <del>SUIS</del> MS	
				PDOP		
REMARKS:						
HWP: Michael Stroh						



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print)							<b>Description of Shipment</b>		
<b>Affiliation:</b> <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other:							Shipped-Carrier: _____ Tape sealed and initialed _____ x Hand Delivered _____		
							No. Of Containers: <u>8</u>		

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
		Matrix	Container	Preserved								
1000358 (Sample A)	Date: 1-25-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								x Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: 1400	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
AB14408								Other:	Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	24°C (None)
										Encore	250mL	Disinfected
										Other: Ziplock		Other
1000359 (Sample B)	Date: 1-26-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								x Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: 1200	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
AB14409								Other:	Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	24°C (None)
										Encore	250mL	Disinfected
										Other: Ziplock		Other
1000360 (Sample C)	Date: 1-27-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
		RUN LAB DUP (Cr <sup>6+</sup> only)						x Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: 0902	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
AB14410								Other:	Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	24°C (None)
										Encore	250mL	Disinfected
										Other: Ziplock		Other
1000361 (Sample D)	Date: 1-26-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
		RUN LAB DUP (Cr <sup>6+</sup> only)						x Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: 1600	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
AB14411								Other:	Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	24°C (None)
										Encore	250mL	Disinfected
										Other: Ziplock		Other

Relinquished By: <u>Ken Hannon</u>	Received By: <u>Maria Stimpson</u>	Date: <u>2-11-10</u>	Time: <u>1058</u>
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	109 SUTS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	209	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	30 SUTS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	210	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	53 SUTS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	212	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	44 SUTS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	213	
				PDOP		
REMARKS:						
HWP: Michael Stroh						



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

Collector's Name: <u>Ken Hannon</u> (Please Print)										Description of Shipment										
Affiliation: <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other: _____										Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered										
										No. Of Containers: <u>8</u>										
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only											
									Matrix	Container				Preserved						
1000362 (Sample A)	Date: 1-27-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Water	1L amber	120 mL			H <sub>2</sub> SO <sub>4</sub>						
		RUN LAB Dup (Cr <sup>6+</sup> only)						<input checked="" type="checkbox"/> Composite	<input checked="" type="checkbox"/> Soil	Cubitainer				HNO <sub>3</sub>						
For Lab Use Only AB14412	Time: 1118	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene		NAOH							
								Other:	Sludge	8 oz glass	1L		HCL							
1000363 (Sample B)	Date: 1-27-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Other:	VOA vial	500mL	24° C (None)								
		RUN LAB Dup (Cr <sup>6+</sup> only)						<input checked="" type="checkbox"/> Composite		Encore	250mL	Disinfected								
For Lab Use Only AB14413	Time: 1046	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Other:	Other: Ziploc		Other								
1000364 (Sample C)	Date: 1-26-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>								
		<del>RUN LAB Dup</del> KH						<input checked="" type="checkbox"/> Composite	<input checked="" type="checkbox"/> Soil	Cubitainer				HNO <sub>3</sub>						
For Lab Use Only AB14414	Time: 1540	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene		NAOH							
								Other:	Sludge	8 oz glass	1L		HCL							
1000365 (Sample D)	Date: 1-26-10	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)						Grab	Other:	VOA vial	500mL	24° C (None)								
		RUN LAB Dup (Cr <sup>6+</sup> only)						<input checked="" type="checkbox"/> Composite		Encore	250mL	Disinfected								
For Lab Use Only AB14415	Time: 1245	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Other:	Other: Ziploc		Other								
Relinquished By: <u>Kenneth Hannon</u>				Received By: <u>Maria S. Thompson</u>				Date: <u>2-11-10</u>				Time: <u>1058</u>								
Relinquished By: _____				Received By: _____				Date: _____				Time: _____								
Relinquished By: _____				Received By: _____				Date: _____				Time: _____								



Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	25 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	214	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	55 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	215	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	50 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	216	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	103 SuIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	217	
				PDOP		
REMARKS:						
HWP: Michael Stroh						



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LABORATORY ORDER ID:

<b>Collector's Name:</b> (Please Print) <u>Ken Hannon</u>							<b>Description of Shipment</b>			
<b>Affiliation:</b> (circle one) <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP							Shipped-Carrier: _____			
(circle one) DGLS HWP Other: _____							Tape sealed and initialed _____			
							x Hand Delivered _____			
							No. Of Containers: <u>8</u>			
Sample Number	Sample Collected	Analyses					Sample Type	For Lab Use Only		
								Matrix	Container	Preserved
<u>1000366</u> (Sample A)	Date: <u>1-26-10</u>	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)					Grab	<input checked="" type="checkbox"/> Water	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>
							x Composite	<input checked="" type="checkbox"/> Soil	<u>Cubitainer</u>	<u>HNO<sub>3</sub></u>
For Lab Use Only	Time: <u>0940</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	<input type="checkbox"/> Organic	<u>2 oz glass Nalgene</u>	<u>NAOH</u>
	<u>AB14416</u>							<input type="checkbox"/> Sludge	<u>1 8 oz glass 1L</u>	<u>HCL</u>
								Other:	<u>VOA vial 500mL</u>	<u>24° C (None)</u>
									<u>Encore 250mL</u>	<u>Disinfected</u>
									<u>1 Other: Ziplock</u>	<u>Other</u>
<u>1000367</u> (Sample B)	Date: <u>1-26-10</u>	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)					Grab	<input checked="" type="checkbox"/> Water	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>
							x Composite	<input checked="" type="checkbox"/> Soil	<u>Cubitainer</u>	<u>HNO<sub>3</sub></u>
For Lab Use Only	Time: <u>0900</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	<input type="checkbox"/> Organic	<u>2 oz glass Nalgene</u>	<u>NAOH</u>
	<u>AB14417</u>							<input type="checkbox"/> Sludge	<u>1 8 oz glass 1L</u>	<u>HCL</u>
								Other:	<u>VOA vial 500mL</u>	<u>24° C (None)</u>
									<u>Encore 250mL</u>	<u>Disinfected</u>
									<u>1 Other: Ziplock</u>	<u>Other</u>
<u>1000368</u> (Sample C)	Date: <u>1-25-10</u>	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)					Grab	<input checked="" type="checkbox"/> Water	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>
							x Composite	<input checked="" type="checkbox"/> Soil	<u>Cubitainer</u>	<u>HNO<sub>3</sub></u>
For Lab Use Only	Time: <u>1704</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	<input type="checkbox"/> Organic	<u>2 oz glass Nalgene</u>	<u>NAOH</u>
	<u>AB14418</u>							<input type="checkbox"/> Sludge	<u>1 8 oz glass 1L</u>	<u>HCL</u>
								Other:	<u>VOA vial 500mL</u>	<u>24° C (None)</u>
									<u>Encore 250mL</u>	<u>Disinfected</u>
									<u>1 Other: Ziplock</u>	<u>Other</u>
<u>1000369</u> (Sample D)	Date: <u>1-25-10</u>	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)					Grab	<input checked="" type="checkbox"/> Water	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>
	<u>1658</u>						x Composite	<input checked="" type="checkbox"/> Soil	<u>Cubitainer</u>	<u>HNO<sub>3</sub></u>
For Lab Use Only	Time: <u>1658</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	<input type="checkbox"/> Organic	<u>2 oz glass Nalgene</u>	<u>NAOH</u>
	<u>AB14419</u>							<input type="checkbox"/> Sludge	<u>1 8 oz glass 1L</u>	<u>HCL</u>
								Other:	<u>VOA vial 500mL</u>	<u>24° C (None)</u>
									<u>Encore 250mL</u>	<u>Disinfected</u>
									<u>1 Other: Ziplock</u>	<u>Other</u>
Relinquished By: <u>Ken Hannon</u>		Received By: <u>Maida Thompson</u>					Date: <u>2-11-10</u>	Time: <u>1058</u>		
Relinquished By:		Received By:					Date:	Time:		
Relinquished By:		Received By:					Date:	Time:		

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 146 SuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		EPE (meters)	218
			PDOP		
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 55 SuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		EPE (meters)	219
			PDOP		
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 150 SuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		EPE (meters)	221
			PDOP		
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 41 SuIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		EPE (meters)	222
			PDOP		
REMARKS: HWP: Michael Stroh					



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print)								<b>Description of Shipment</b>					
<b>Affiliation:</b> ESP KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other:								<input type="checkbox"/> Shipped-Carrier: <input type="checkbox"/> Tape sealed and initialed <input checked="" type="checkbox"/> Hand Delivered					
								No. Of Containers: <u>4</u>					
<b>Sample Number</b>	<b>Sample Collected</b>	<b>Analyses</b>						<b>Sample Type</b>	<b>For Lab Use Only</b>				
									<b>Matrix</b>	<b>Container</b>		<b>Preserved</b>	
<u>1000370</u> (Sample A)	Date: <u>1.26.10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Soil	<u>1L</u> amber	<u>120</u> mL	<u>H<sub>2</sub>SO<sub>4</sub></u>	
For Lab Use Only	Time: <u>14:44</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>2 oz</u> glass	<u>Nalgene</u>		<u>HNO<sub>3</sub></u>	
<u>AB14420</u>									<u>8 oz</u> glass	<u>1L</u>		<u>NAOH</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4° C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:	<u>2</u>	<u>Other</u>	
<u>1000371</u> (Sample B)	Date: <u>1.26.10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Soil	<u>1L</u> amber	<u>120</u> mL	<u>H<sub>2</sub>SO<sub>4</sub></u>	
For Lab Use Only	Time: <u>14:15</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>2 oz</u> glass	<u>Nalgene</u>		<u>HNO<sub>3</sub></u>	
<u>AB14421</u>									<u>8 oz</u> glass	<u>1L</u>		<u>NAOH</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4° C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:		<u>Other</u>	
<u>1000372</u> (Sample C)	Date: <u>1.26.10</u>	Hexavalent Chromium Percent Moisture <u>HOLD FOR LATER ANALYSIS</u>						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Soil	<u>1L</u> amber	<u>120</u> mL	<u>H<sub>2</sub>SO<sub>4</sub></u>	
For Lab Use Only	Time: <u>14:15</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>2 oz</u> glass	<u>Nalgene</u>		<u>HNO<sub>3</sub></u>	
<u>AB14422</u>									<u>8 oz</u> glass	<u>1L</u>		<u>NAOH</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4° C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:		<u>Other</u>	
<u>1000373</u> (Sample D)	Date: <u>1.27.10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Soil	<u>1L</u> amber	<u>120</u> mL	<u>H<sub>2</sub>SO<sub>4</sub></u>	
For Lab Use Only	Time: <u>15:30</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>2 oz</u> glass	<u>Nalgene</u>		<u>HNO<sub>3</sub></u>	
<u>AB14423</u>									<u>8 oz</u> glass	<u>1L</u>		<u>NAOH</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4° C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:		<u>Other</u>	
Relinquished By: <u>Ken Hannon</u>		Received By: <u>Maria S. Thompson</u>						Date: <u>2-11-10</u>	Time: <u>1104</u>				
Relinquished By:		Received By:						Date:	Time:				
Relinquished By:		Received By:						Date:	Time:				

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 29 SUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	202
			PDOP		
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 79 SUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	202
			PDOP		
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	202
			PDOP		
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 7 SUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	203
			PDOP		
REMARKS: HWP: Michael Stroh					



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print) <b>Affiliation:</b> <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> (circle one) <u>DGLS</u> <u>HWP</u> Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered _____				No. Of Containers: <u>4</u>			
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only						
									Matrix	Container		Preserved			
1000374 (Sample A)	Date:	Hexavalent Chromium Percent Moisture						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-27-10							<input checked="" type="checkbox"/> Soil	Cubitainer			HNO <sub>3</sub>			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH			
	1530								Sludge	8 oz glass	1L	HCL			
AB14424									Other:	VOA vial	500mL	4° C(None)			
										Encore	250mL	Disinfected			
									Other:			Other			
1000375 (Sample B)	Date:	Hexavalent Chromium Percent Moisture						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-27-10	HOLD FOR LATER ANALYSIS						<input checked="" type="checkbox"/> Soil	Cubitainer			HNO <sub>3</sub>			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH			
	1530								Sludge	8 oz glass	1L	HCL			
AB14425									Other:	VOA vial	500mL	4° C(None)			
										Encore	250mL	Disinfected			
									Other:			Other			
1000376 (Sample C)	Date:	Hexavalent Chromium Percent Moisture						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-27-10							<input checked="" type="checkbox"/> Soil	Cubitainer			HNO <sub>3</sub>			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH			
	1256								Sludge	8 oz glass	1L	HCL			
AB14426									Other:	VOA vial	500mL	4° C(None)			
										Encore	250mL	Disinfected			
									Other:			Other			
1000377 (Sample D)	Date:	Hexavalent Chromium Percent Moisture						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-27-10							<input checked="" type="checkbox"/> Soil	Cubitainer			HNO <sub>3</sub>			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH			
	1350								Sludge	8 oz glass	1L	HCL			
AB14427									Other:	VOA vial	500mL	4° C(None)			
										Encore	250mL	Disinfected			
									Other:			Other			
Relinquished By:		Kenneth Hannon						Received By:		M. S. Thompson		Date:	2-11-10	Time:	1104
Relinquished By:								Received By:				Date:		Time:	
Relinquished By:								Received By:				Date:		Time:	

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	27 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	203	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	203	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	99 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	KH 209 204	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	23 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	204	
				PDOP		

## REMARKS:

HWP: Michael Stroh



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FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> (Please Print) <u>Ken Hannon</u> <b>Affiliation:</b> <input checked="" type="radio"/> ESP    KCRO    NERO    SERO    SLRO    SWRO    WPP (circle one)    DGLS    HWP    Other: _____						<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered    No. Of Containers: <u>4</u>						
Sample Number	Sample Collected	Analyses					Sample Type	For Lab Use Only				
								Matrix	Container		Preserved	
<u>1000378</u> (Sample A)	Date: <u>1-27-10</u>	Hexavalent Chromium Percent Moisture <div style="font-size: 1.5em; margin-top: 10px; text-align: center;">Hold For Later Analysis</div>					Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<u>✓</u> Soil	1L amber    120 mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____		
	For Lab Use Only <u>AB14428</u>							Time: <u>1256</u>	D.O.    Flow    pH    Spec. Cond.    Temp.    Other: _____	Water <u>✓</u> Soil Organic Sludge Other: _____	Cubitainer 2 oz glass    Nalgene 8 oz glass    1L VOA vial    500mL Encore    250mL Other: _____	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____
<u>1000379</u> (Sample B)	Date: <u>1-26-10</u>						Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<u>✓</u> Soil	1L amber    120 mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____		
	For Lab Use Only <u>AB14429</u>							Time: <u>1120</u>	D.O.    Flow    pH    Spec. Cond.    Temp.    Other: _____	Water <u>✓</u> Soil Organic Sludge Other: _____	Cubitainer 2 oz glass    Nalgene 8 oz glass    1L VOA vial    500mL Encore    250mL Other: _____	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____
<u>1000380</u> (Sample C)	Date: <u>1-26-10</u>						Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<u>✓</u> Soil	1L amber    120 mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____		
	For Lab Use Only <u>AB14430</u>							Time: <u>1100</u>	D.O.    Flow    pH    Spec. Cond.    Temp.    Other: _____	Water <u>✓</u> Soil Organic Sludge Other: _____	Cubitainer 2 oz glass    Nalgene 8 oz glass    1L VOA vial    500mL Encore    250mL Other: _____	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____
<u>1000382</u> (Sample D)	Date: <u>1-26-10</u>						Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<u>✓</u> Soil	1L amber    120 mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____		
	For Lab Use Only <u>AB14431</u>							Time: <u>1100</u>	D.O.    Flow    pH    Spec. Cond.    Temp.    Other: _____	Water <u>✓</u> Soil Organic Sludge Other: _____	Cubitainer 2 oz glass    Nalgene 8 oz glass    1L VOA vial    500mL Encore    250mL Other: _____	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other: _____
Relinquished By: <u>Kenneth Hannon</u>						Received By: <u>Paul S. Thompson</u>		Date: <u>2-11-10</u>		Time: <u>1104</u>		
Relinquished By: _____						Received By: _____		Date: _____		Time: _____		
Relinquished By: _____						Received By: _____		Date: _____		Time: _____		



Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	204	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 71 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	205	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 34 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	205	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	205	
				PDOP		
REMARKS: HWP: Michael Stroh						



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> <small>(Please Print)</small> <b>Affiliation:</b> <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> <small>(circle one)</small> <u>DGLS</u> <u>HWP</u> Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered _____			
								No. Of Containers: <u>4</u>			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only					
									Matrix		Container		Preserved	
1000382 (Sample A)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-25-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only AB14432	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
	1400							Other:	Sludge	8 oz glass	1L	HCL		
								Other:	VOA vial	500mL	4° C(None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000383 (Sample B)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-25-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only AB14433	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
	1405							Other:	Sludge	8 oz glass	1L	HCL		
								Other:	VOA vial	500mL	4° C(None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000384 (Sample C)	Date:	Hexavalent Chromium Percent Moisture <u>HOLD FOR LATER ANALYSIS</u>						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-25-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only AB14434	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
	1400							Other:	Sludge	8 oz glass	1L	HCL		
								Other:	VOA vial	500mL	4° C(None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000385 (Sample D)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-26-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only AB14435	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
	1530							Other:	Sludge	8 oz glass	1L	HCL		
								Other:	VOA vial	500mL	4° C(None)			
									Encore	250mL	Disinfected			
									Other:		Other			

Relinquished By: <u>Ken Hannon</u>		Received By: <u>Maude Thompson</u>		Date: <u>2-11-10</u>	Time: <u>1104</u>
Relinquished By: _____		Received By: _____		Date: _____	Time: _____
Relinquished By: _____		Received By: _____		Date: _____	Time: _____

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	138 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	209	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	144 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	209	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	209	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	15 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	210	
				PDOP		
REMARKS:						
HWP: Michael Stroh						



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print) <b>Affiliation:</b> <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> (circle one) <u>DGLS</u> <u>HWP</u> Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered				No. Of Containers: <u>4</u>					
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only								
									Matrix	Container		Preserved					
1000386 (Sample A)	Date:	Hexavalent Chromium Percent Moisture						Grab	<input checked="" type="checkbox"/> Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>					
	1-26-10							<input checked="" type="checkbox"/> Composite	<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>					
For Lab Use Only A614436	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH					
	1600								Sludge	8 oz glass	1L	HCL					
1000387 (Sample B)	Date:	Hexavalent Chromium Percent Moisture						Grab	Other:	VOA vial	500mL	4° C(None)					
	1-26-10	HOLD FOR LATER ANALYSIS						<input checked="" type="checkbox"/> Composite	Encore	250mL	Disinfected						
For Lab Use Only A614437	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:			Other					
	1530																
1000388 (Sample C)	Date:	Hexavalent Chromium Percent Moisture						Grab	<input checked="" type="checkbox"/> Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>					
	1-27-10							<input checked="" type="checkbox"/> Composite	<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>					
For Lab Use Only A614438	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH					
	0948								Sludge	8 oz glass	1L	HCL					
1000389 (Sample D)	Date:	Hexavalent Chromium Percent Moisture						Grab	Other:	VOA vial	500mL	4° C(None)					
	1-27-10							<input checked="" type="checkbox"/> Composite	Encore	250mL	Disinfected						
For Lab Use Only A614439	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:			Other					
	1030																
Relinquished By: <u>Kenneth Hannon</u>							Received By: <u>Maude Thompson</u>							Date: <u>2-11-10</u>		Time: <u>1104</u>	
Relinquished By:							Received By:							Date:		Time:	
Relinquished By:							Received By:							Date:		Time:	

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEPA8</b>	Job Code: <b>NJ10 TSFF</b>	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>62 SUTS</b>					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters)	210	
				<input type="checkbox"/> PDOP		
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEPA8</b>	Job Code: <b>NJ10 TSFF</b>	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>DUIS</b>					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters)	210	
				<input type="checkbox"/> PDOP		
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEPA8</b>	Job Code: <b>NJ10 TSFF</b>	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>16 SUTS</b>					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters)	212	
				<input type="checkbox"/> PDOP		
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEPA8</b>	Job Code: <b>NJ10 TSFF</b>	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>86 SUTS</b>					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting	<input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters)	212	
				<input type="checkbox"/> PDOP		
REMARKS: HWP: Michael Stroh						



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print) <b>Affiliation:</b> <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> (circle one) <u>DGLS</u> <u>HWP</u> Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered _____ No. Of Containers: <u>4</u>				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
									<b>Matrix</b>	<b>Container</b>		<b>Preserved</b>
1000390 (Sample A)	Date: 1-27-10	Hexavalent Chromium Percent Moisture <u>Hold for later analysis</u> KH						Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input checked="" type="checkbox"/> Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>
									<input type="checkbox"/> Organic	2 oz glass	Nalgene	NAOH
									<input type="checkbox"/> Sludge	8 oz glass	1L	HCL
									<input type="checkbox"/> Other:	VOA vial	500mL	4° C (None)
For Lab Use Only	Time: 0902	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:		<input type="checkbox"/> Encore	250mL	Disinfected	
AG14440									<input type="checkbox"/> Other:		Other	
1000391 (Sample B)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input checked="" type="checkbox"/> Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>
									<input type="checkbox"/> Organic	2 oz glass	Nalgene	NAOH
									<input type="checkbox"/> Sludge	8 oz glass	1L	HCL
									<input type="checkbox"/> Other:	VOA vial	500mL	4° C (None)
For Lab Use Only	Time: 1600	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:		<input type="checkbox"/> Encore	250mL	Disinfected	
AG14440									<input type="checkbox"/> Other:		Other	
1000392 (Sample C)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input checked="" type="checkbox"/> Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>
									<input type="checkbox"/> Organic	2 oz glass	Nalgene	NAOH
									<input type="checkbox"/> Sludge	8 oz glass	1L	HCL
									<input type="checkbox"/> Other:	VOA vial	500mL	4° C (None)
For Lab Use Only	Time: 1626	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:		<input type="checkbox"/> Encore	250mL	Disinfected	
AG14442									<input type="checkbox"/> Other:		Other	
1000393 (Sample D)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input checked="" type="checkbox"/> Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>
									<input type="checkbox"/> Organic	2 oz glass	Nalgene	NAOH
									<input type="checkbox"/> Sludge	8 oz glass	1L	HCL
									<input type="checkbox"/> Other:	VOA vial	500mL	4° C (None)
For Lab Use Only	Time: 1600	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:		<input type="checkbox"/> Encore	250mL	Disinfected	
AG14443									<input type="checkbox"/> Other:		Other	
Relinquished By: <u>Ken Hannon</u>								Received By: <u>Maeda Thompson</u>		Date: <u>2-11-10</u>		Time: <u>1104</u>
Relinquished By: _____								Received By: _____		Date: _____		Time: _____
Relinquished By: _____								Received By: _____		Date: _____		Time: _____

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	DUIS				
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	9 SUIIS				
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	15 SUIIS				
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	DUIS				
REMARKS:					
HWP: Michael Stroh					



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> <small>(Please Print)</small> <b>Affiliation:</b> <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP <small>(circle one)</small> DGLS HWP Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered _____			
								No. Of Containers: <u>4</u>			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only					
									Matrix		Container		Preserved	
1000394 (Sample A)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-27-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
AB14444	1118								Sludge	8 oz glass	1L	HCL		
									Other:	VOA vial	500mL	4° C (None)		
										Encore	250mL	Disinfected		
										Other:		Other		
1000395 (Sample B)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-27-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
AB14445	1210								Sludge	8 oz glass	1L	HCL		
									Other:	VOA vial	500mL	4° C (None)		
										Encore	250mL	Disinfected		
										Other:		Other		
1000396 (Sample C)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-27-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
AB14446	1118								Sludge	8 oz glass	1L	HCL		
									Other:	VOA vial	500mL	4° C (None)		
										Encore	250mL	Disinfected		
										Other:		Other		
1000397 (Sample D)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	1-27-10								<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH		
AB14447	1110								Sludge	8 oz glass	1L	HCL		
									Other:	VOA vial	500mL	4° C (None)		
										Encore	250mL	Disinfected		
										Other:		Other		

Relinquished By: <u>Ken Hannon</u>		Received By: <u>Made Thompson</u>		Date: <u>2-11-10</u>	Time: <u>1110</u>
Relinquished By: _____		Received By: _____		Date: _____	Time: _____
Relinquished By: _____		Received By: _____		Date: _____	Time: _____



Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	53 SWIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	214	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	23 SWIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	214	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	214	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	82 SWIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	215	
				PDOP		
REMARKS:						
HWP: Michael Stroh						



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> <small>(Please Print)</small> <b>Affiliation:</b> <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> <small>(circle one)</small> <u>DGLS</u> <u>HWP</u> <u>Other:</u>								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered				No. Of Containers: <u>4</u>	
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only				
									<b>Matrix</b>	<b>Container</b>		<b>Preserved</b>	
<u>1000398</u> <b>(Sample A)</b>	Date: <u>1-27-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified Other:	<u>Water</u>	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>		
									<input checked="" type="checkbox"/> Soil <u>Organic</u> <u>Sludge</u> Other:	<u>Cubitainer</u> <u>2 oz glass</u> <u>Nalgene</u> <u>8 oz glass</u> <u>1L</u> <u>VOA vial</u> <u>500mL</u> <u>Encore</u> <u>250mL</u> Other:	<u>HNO<sub>3</sub></u> <u>NAOH</u> <u>HCL</u> <u>4° C(None)</u> <u>Disinfected</u> Other:		
For Lab Use Only <u>AB14448</u>	Time: <u>1046</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
<u>1000399</u> <b>(Sample B)</b>	Date: <u>1-27-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified Other:	<u>Water</u>	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>		
									<input checked="" type="checkbox"/> Soil <u>Organic</u> <u>Sludge</u> Other:	<u>Cubitainer</u> <u>2 oz glass</u> <u>Nalgene</u> <u>8 oz glass</u> <u>1L</u> <u>VOA vial</u> <u>500mL</u> <u>Encore</u> <u>250mL</u> Other:	<u>HNO<sub>3</sub></u> <u>NAOH</u> <u>HCL</u> <u>4° C(None)</u> <u>Disinfected</u> Other:		
For Lab Use Only <u>AB14449</u>	Time: <u>1046</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
<u>1000400</u> <b>(Sample C)</b>	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified Other:	<u>Water</u>	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>		
									<input checked="" type="checkbox"/> Soil <u>Organic</u> <u>Sludge</u> Other:	<u>Cubitainer</u> <u>2 oz glass</u> <u>Nalgene</u> <u>8 oz glass</u> <u>1L</u> <u>VOA vial</u> <u>500mL</u> <u>Encore</u> <u>250mL</u> Other:	<u>HNO<sub>3</sub></u> <u>NAOH</u> <u>HCL</u> <u>4° C(None)</u> <u>Disinfected</u> Other:		
For Lab Use Only <u>AB14450</u>	Time: <u>1540</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
<u>1000401</u> <b>(Sample D)</b>	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified Other:	<u>Water</u>	<u>1L amber</u> <u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>		
									<input checked="" type="checkbox"/> Soil <u>Organic</u> <u>Sludge</u> Other:	<u>Cubitainer</u> <u>2 oz glass</u> <u>Nalgene</u> <u>8 oz glass</u> <u>1L</u> <u>VOA vial</u> <u>500mL</u> <u>Encore</u> <u>250mL</u> Other:	<u>HNO<sub>3</sub></u> <u>NAOH</u> <u>HCL</u> <u>4° C(None)</u> <u>Disinfected</u> Other:		
For Lab Use Only <u>AB14451</u>	Time: <u>1603</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
Relinquished By: <u>Ken Hannon</u>								Received By: <u>Nick Thompson</u>		Date: <u>2-11-10</u>		Time: <u>1110</u>	
Relinquished By:								Received By:		Date:		Time:	
Relinquished By:								Received By:		Date:		Time:	

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 110 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	215	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	215	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 32 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	216	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 16 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	216	
				PDOP		
REMARKS: HWP: Michael Stroh						



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print)								<b>Description of Shipment</b>					
<b>Affiliation:</b> <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other: _____								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered					
								No. Of Containers: <u>4</u>					
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only				
									Matrix	Container		Preserved	
<u>1000402</u> (Sample A)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab	<u>✓</u> Soil	<u>1L amber</u>	<u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>	
		<u>HOLD FOR LATER ANALYSIS</u>						<input checked="" type="checkbox"/> Composite	<u>✓</u> Soil	<u>Cubitainer</u>		<u>HNO<sub>3</sub></u>	
For Lab Use Only	Time: <u>1540</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>Organic</u>	<u>2 oz glass</u>	<u>Nalgene</u>	<u>NAOH</u>	
<u>AB14452</u>									<u>Sludge</u>	<u>8 oz glass</u>	<u>1L</u>	<u>HCL</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4°C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:		<u>Other</u>	
<u>1000403</u> (Sample B)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab	<u>✓</u> Soil	<u>1L amber</u>	<u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>	
								<input checked="" type="checkbox"/> Composite	<u>✓</u> Soil	<u>Cubitainer</u>		<u>HNO<sub>3</sub></u>	
For Lab Use Only	Time: <u>1321</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>Organic</u>	<u>2 oz glass</u>	<u>Nalgene</u>	<u>NAOH</u>	
<u>AB14453</u>									<u>Sludge</u>	<u>8 oz glass</u>	<u>1L</u>	<u>HCL</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4°C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:		<u>Other</u>	
<u>1000404</u> (Sample C)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab	<u>✓</u> Soil	<u>1L amber</u>	<u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>	
								<input checked="" type="checkbox"/> Composite	<u>✓</u> Soil	<u>Cubitainer</u>		<u>HNO<sub>3</sub></u>	
For Lab Use Only	Time: <u>1147</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>Organic</u>	<u>2 oz glass</u>	<u>Nalgene</u>	<u>NAOH</u>	
<u>AB14454</u>									<u>Sludge</u>	<u>8 oz glass</u>	<u>1L</u>	<u>HCL</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4°C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:		<u>Other</u>	
<u>1000405</u> (Sample D)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab	<u>✓</u> Soil	<u>1L amber</u>	<u>120 mL</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>	
								<input checked="" type="checkbox"/> Composite	<u>✓</u> Soil	<u>Cubitainer</u>		<u>HNO<sub>3</sub></u>	
For Lab Use Only	Time: <u>1245</u>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	<u>Organic</u>	<u>2 oz glass</u>	<u>Nalgene</u>	<u>NAOH</u>	
<u>AB14455</u>									<u>Sludge</u>	<u>8 oz glass</u>	<u>1L</u>	<u>HCL</u>	
									Other:	<u>VOA vial</u>	<u>500mL</u>	<u>4°C (None)</u>	
										<u>Encore</u>	<u>250mL</u>	<u>Disinfected</u>	
										Other:		<u>Other</u>	
Relinquished By: <u>Kenneth Hannon</u>		Received By: <u>Maureen Thompson</u>						Date: <u>2-11-10</u>	Time: <u>1110</u>				
Relinquished By: _____		Received By: _____						Date: _____	Time: _____				
Relinquished By: _____		Received By: _____						Date: _____	Time: _____				

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	216	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	22 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	217	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	50 SUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	217	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	217	
				PDOP		
REMARKS:						
HWP: Michael Stroh						



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print)								<b>Description of Shipment</b>			
<b>Affiliation:</b> <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ x Hand Delivered _____			
								No. Of Containers: <u>4</u>			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only					
		Matrix	Container		Preserved									
1000406 (Sample A)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						<input type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/> Modified Other:	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	Soil	Cubitainer		HNO <sub>3</sub>										
For Lab Use Only	Time: 1055	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
	AB14456							Sludge	8 oz glass	1L	HCL			
								Other:	VOA vial	500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000407 (Sample B)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						<input type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/> Modified Other:	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	Soil	Cubitainer		HNO <sub>3</sub>										
For Lab Use Only	Time: 0940	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
	AB14457							Sludge	8 oz glass	1L	HCL			
								Other:	VOA vial	500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000408 (Sample C)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						<input type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/> Modified Other:	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	Soil	Cubitainer		HNO <sub>3</sub>										
For Lab Use Only	Time: 0940	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
	AB14458							Sludge	8 oz glass	1L	HCL			
								Other:	VOA vial	500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000409 (Sample D)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						<input type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/> Modified Other:	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
	Soil	Cubitainer		HNO <sub>3</sub>										
For Lab Use Only	Time: 1255	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
	AB14459							Sludge	8 oz glass	1L	HCL			
								Other:	VOA vial	500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			

Relinquished By: <u>Kenneth Hannon</u>	Received By: <u>Michael Thompson</u>	Date: <u>2-11-10</u>	Time: <u>1110</u>
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	102 Suis					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	218	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	218 87 Suis					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	218	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	Du IS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	218	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	42 Suis					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	219	
				PDOP		
REMARKS:						
HWP: Michael Stroh						



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print) <b>Affiliation:</b> <input checked="" type="radio"/> ESP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input type="radio"/> HWP    Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered    No. Of Containers: <u>4</u>				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
									<b>Matrix</b>	<b>Container</b>		<b>Preserved</b>
1000410 (Sample A)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	1-26-10								Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only AB14460	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH
	0900							Other:	Sludge	8 oz glass	1L	HCL
1000411 (Sample B)	Date:	Hexavalent Chromium Percent Moisture  <u>HOLD FOR LATER ANALYSIS</u>						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	1-26-10								Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only AB14461	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH
	0900							Other:	Sludge	8 oz glass	1L	HCL
1000412 (Sample C)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	1-25-10								Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only AB14462	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH
	1704							Other:	Sludge	8 oz glass	1L	HCL
1000413 (Sample D)	Date:	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	1-25-10								Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only AB14463	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH
	1730							Other:	Sludge	8 oz glass	1L	HCL
Relinquished By: <u>Kenneth Hannon</u>								Received By: <u>Madea Thompson</u>		Date: <u>2-11-10</u>		Time: <u>1110</u>
Relinquished By: _____								Received By: _____		Date: _____		Time: _____
Relinquished By: _____								Received By: _____		Date: _____		Time: _____



Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	15 Suis				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	219
			PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	K# 215 DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	219
			PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	164 Suis				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	221
			PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF
	109 Suis				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	221
			PDOP		
REMARKS:					
HWP: Michael Stroh					



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print) <b>Affiliation:</b> <input checked="" type="radio"/> SP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input type="radio"/> HWP Other: _____							<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered					No. Of Containers: <u>4</u>	
--	--	--	--	--	--	--	---	--	--	--	--	-----------------------------	--

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only						
				Matrix	Container	Preserved				
1000414 (Sample A)	Date:	Hexavalent Chromium Percent Moisture		Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber 120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-25-10	HOLD FOR LATER ANALYSIS			<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:			D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic
AB14464	1704							Sludge	8 oz glass 1L	HCL
								Other:	VOA vial 500mL	4° C (None)
									Encore 250mL	Disinfected
									Other:	Other
1000415 (Sample B)	Date:	Hexavalent Chromium Percent Moisture		Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber 120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-25-10				<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:			D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic
AB14465	1710							Sludge	8 oz glass 1L	HCL
								Other:	VOA vial 500mL	4° C (None)
									Encore 250mL	Disinfected
									Other:	Other
1000416 (Sample C)	Date:	Hexavalent Chromium Percent Moisture		Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber 120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-25-10				<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:			D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic
AB14466	1730							Sludge	8 oz glass 1L	HCL
								Other:	VOA vial 500mL	4° C (None)
									Encore 250mL	Disinfected
									Other:	Other
1000417 (Sample D)	Date:	Hexavalent Chromium Percent Moisture		Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber 120 mL	H <sub>2</sub> SO <sub>4</sub>			
	1-25-10	HOLD FOR LATER ANALYSIS			<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:			D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic
AB14467	1658							Sludge	8 oz glass 1L	HCL
								Other:	VOA vial 500mL	4° C (None)
									Encore 250mL	Disinfected
									Other:	Other

Relinquished By: <u>Kenneth Hannon</u>		Received By: <u>Melinda Thompson</u>		Date: <u>2-11-10</u>	Time: <u>1110</u>
Relinquished By: _____		Received By: _____		Date: _____	Time: _____
Relinquished By: _____		Received By: _____		Date: _____	Time: _____

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUTS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	221
			PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 10 SUTS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	222
			PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 27 SUTS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	222
			PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUTS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	222
			PDOP		
REMARKS:					
HWP: Michael Stroh					



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FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> Ken Hannon (Please Print) <b>Affiliation:</b> <input checked="" type="radio"/> ESP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input type="radio"/> HWP Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered _____ No. Of Containers: 4				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
									Matrix	Container	Preserved	
1000418 (Sample A)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass Nalgene 8 oz glass 1L VOA vial 500mL Encore 250mL Other:	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other	
For Lab Use Only AB14468	Time: 0940	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:				
1000419 (Sample B)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass Nalgene 8 oz glass 1L VOA vial 500mL Encore 250mL Other:	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other	
For Lab Use Only AB14469	Time: 0900	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:				
1000420 (Sample C)	Date: 1-27-10	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass Nalgene 8 oz glass 1L VOA vial 500mL Encore 250mL Other:	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other	
For Lab Use Only AB14470	Time: 0920	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:				
1000421 (Sample D)	Date: 1-27-10	Hexavalent Chromium Percent Moisture Held for Later Analysis						Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass Nalgene 8 oz glass 1L VOA vial 500mL Encore 250mL Other:	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other	
For Lab Use Only AB14471	Time: 0900	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Other:				
Relinquished By: Kenneth Hannon		Received By: Mark Thompson						Date: 2-11-10	Time: 1114			
Relinquished By:		Received By:						Date:	Time:			
Relinquished By:		Received By:						Date:	Time:			

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 19 SUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	224
			PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 23 SUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	224
			PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 74 SUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	224
			PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUI S				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters)	224
			PDOP		
REMARKS: HWP: Michael Stroh					



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> (Please Print) <b>Affiliation:</b> <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other: _____							<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered _____				
							No. Of Containers: <u>4</u>				

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only								
									Matrix		Container		Preserved				
1000422 (Sample A)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>					
	✓Soil								Cubitainer		HNO <sub>3</sub>						
For Lab Use Only	Time: <u>1210</u>	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH					
	<u>AB14472</u>								Sludge	8 oz glass	1L	HCL					
									Other:	VOA vial	500mL	4° C (None)					
										Encore	250mL	Disinfected					
										Other:		Other					
1000423 (Sample B)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>					
	✓Soil								Cubitainer		HNO <sub>3</sub>						
For Lab Use Only	Time: <u>1240</u>	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH					
	<u>AB14473</u>								Sludge	8 oz glass	1L	HCL					
									Other:	VOA vial	500mL	4° C (None)					
										Encore	250mL	Disinfected					
										Other:		Other					
1000424 (Sample C)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>					
	✓Soil								Cubitainer		HNO <sub>3</sub>						
For Lab Use Only	Time: <u>1210</u>	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH					
	<u>AB14474</u>								Sludge	8 oz glass	1L	HCL					
									Other:	VOA vial	500mL	4° C (None)					
										Encore	250mL	Disinfected					
										Other:		Other					
1006425 (Sample D)	Date: <u>1-26-10</u>	Hexavalent Chromium Percent Moisture						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>					
	✓Soil								Cubitainer		HNO <sub>3</sub>						
For Lab Use Only	Time: <u>1050</u>	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NAOH					
	<u>AB14475</u>								Sludge	8 oz glass	1L	HCL					
									Other:	VOA vial	500mL	4° C (None)					
										Encore	250mL	Disinfected					
										Other:		Other					
Relinquished By: <u>Ken Hannon</u>							Received By: <u>Michael Thompson</u>							Date: <u>2-11-10</u>		Time: <u>1110</u>	
Relinquished By: _____							Received By: _____							Date: _____		Time: _____	
Relinquished By: _____							Received By: _____							Date: _____		Time: _____	

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 4 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	223	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 28 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	223	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	223	
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): 60 SUI S					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	225	
				PDOP		
REMARKS: HWP: Michael Stroh						



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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> (Please Print) <u>Ken Hannon</u> <b>Affiliation:</b> <input checked="" type="radio"/> BSP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input type="radio"/> HWP <input type="radio"/> Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered _____			
								No. Of Containers: <u>2</u>			

Sample Number	Sample Collected	Analyses	Sample Type	For Lab Use Only			
				Matrix	Container	Preserved	
1000426 (Sample A)	Date:	Hexavalent Chromium Percent Moisture	Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	1-26-10		<input checked="" type="checkbox"/> Composite	<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>
			Modified	Organic	2 oz glass	Nalgene	NAOH
			Other:	Sludge	8 oz glass	1L	HCL
				Other:	VOA vial	500mL	4° C (None)
					Encore	250mL	Disinfected
					Other:		Other
1000427 (Sample B)	Date:	Hexavalent Chromium Percent Moisture	Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	1-26-10		<input checked="" type="checkbox"/> Composite	<input checked="" type="checkbox"/> Soil	Cubitainer		HNO <sub>3</sub>
			Modified	Organic	2 oz glass	Nalgene	NAOH
			Other:	Sludge	8 oz glass	1L	HCL
				Other:	VOA vial	500mL	4° C (None)
					Encore	250mL	Disinfected
					Other:		Other
(Sample C)	Date:	Hexavalent Chromium Percent Moisture	Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
			<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
			Modified	Organic	2 oz glass	Nalgene	NAOH
			Other:	Sludge	8 oz glass	1L	HCL
				Other:	VOA vial	500mL	4° C (None)
					Encore	250mL	Disinfected
					Other:		Other
(Sample D)	Date:	Hexavalent Chromium Percent Moisture	Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
			<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
			Modified	Organic	2 oz glass	Nalgene	NAOH
			Other:	Sludge	8 oz glass	1L	HCL
				Other:	VOA vial	500mL	4° C (None)
					Encore	250mL	Disinfected
					Other:		Other

Relinquished By: <u>Kenneth Hannon</u>	Received By: <u>Maida Thompson</u>	Date: <u>2-11-10</u>	Time: <u>1110</u>
Relinquished By: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Received By: _____	Date: _____	Time: _____



Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	8 SUTS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	225	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	DUTS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	225	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)		
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				TSFF	
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)		
				PDOP		
REMARKS:						
HWP: Michael Stroh						



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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LABORATORY ORDER ID: \_\_\_\_\_

<b>Collector's Name:</b> <u>Ken Hannon</u> <small>(Please Print)</small> <b>Affiliation:</b> ESP    KCRO    NERO    SERO    SLRO    SWRO    WPP <small>(circle one)</small> DGLS    HWP    Other: _____								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered                      No. Of Containers: <u>4</u>			
--	--	--	--	--	--	--	--	--	--	--	--

Sample Number	Sample Collected	Analyses	Sample Type	<b>For Lab Use Only</b>		
				Matrix	Container	Preserved
<u>1000429</u> (Sample A)	Date: <u>1-26-10</u> Time: <u>1322</u>	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other: _____	1L amber _____ 120 mL Cubitainer _____ 2 oz glass Nalgene _____ 8 oz glass 1L _____ VOA vial _____ 500mL Encore _____ 250mL Other: <u>Ziplock</u>	H <sub>2</sub> SO <sub>4</sub> _____ HNO <sub>3</sub> _____ NaOH _____ HCL _____ 24° C(None) _____ Disinfected _____ Other _____
	For Lab Use Only <u>AB14478</u>					
<u>1000430</u> (Sample B)	Date: <u>1-26-10</u> Time: <u>1020</u>	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other: _____	1L amber _____ 120 mL Cubitainer _____ 2 oz glass Nalgene _____ 8 oz glass 1L _____ VOA vial _____ 500mL Encore _____ 250mL Other: <u>Ziplock</u>	H <sub>2</sub> SO <sub>4</sub> _____ HNO <sub>3</sub> _____ NaOH _____ HCL _____ 24° C(None) _____ Disinfected _____ Other _____
	For Lab Use Only <u>AB14479</u>					
(Sample C)	Date: _____ Time: _____	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other: _____	1L amber _____ 120 mL Cubitainer _____ 2 oz glass Nalgene _____ 8 oz glass 1L _____ VOA vial _____ 500mL Encore _____ 250mL Other: _____	H <sub>2</sub> SO <sub>4</sub> _____ HNO <sub>3</sub> _____ NaOH _____ HCL _____ 4° C(None) _____ Disinfected _____ Other _____
	For Lab Use Only					
(Sample D)	Date: _____ Time: _____	Hexavalent Chromium, TOC, pH, Percent Moisture, ORP, Total Metals (Fe, Mn, Mo, V, Al)	Grab <input checked="" type="checkbox"/> Composite Modified Other: _____	<input type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other: _____	1L amber _____ 120 mL Cubitainer _____ 2 oz glass Nalgene _____ 8 oz glass 1L _____ VOA vial _____ 500mL Encore _____ 250mL Other: _____	H <sub>2</sub> SO <sub>4</sub> _____ HNO <sub>3</sub> _____ NaOH _____ HCL _____ 4° C(None) _____ Disinfected _____ Other _____
	For Lab Use Only					

Relinquished By: <u>Kenneth Hannon</u>	Received By: <u>Paula Thompson</u>	Date: <u>2-11-10</u>	Time: <u>1058</u>
Relinquished By: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Received By: _____	Date: _____	Time: _____

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	44 SVIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	223	
				PDOP		
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	32 SVIS					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	225	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)		
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)		
				PDOP		
REMARKS:						
HWP: Michael Stroh						



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LABORATORY ORDER ID: 100129004

Collector's Name: Sean Counihan (Please Print)								Description of Shipment			
Affiliation: <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ x Hand Delivered _____			
								No. Of Containers: 3			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only						
		Matrix		Container		Preserved									
1000501 (Sample A)	Date: 01/26/10	Total Metals (Cr) <i>Hex. Cr<sub>5</sub>ml</i>						x Grab Composite Modified Other:	Water Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other			
	For Lab Use Only	Time: 1627	D.O.	Flow	pH 6.82	Spec. Cond. 483µS	Temp. 12.7°C						Other:		
1000502 (Sample B)	Date: 01/26/10	Total Metals (Cr) <i>Hex. Cr<sub>5</sub>ml</i>						x Grab Composite Modified Other:	Water Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other			
	For Lab Use Only	Time: 1635	D.O.	Flow	pH	Spec. Cond.	Temp.						Other:		
1000503 (Sample C)	Date: 01/26/10	Total Metals (Cr) <i>Hex. Cr<sub>5</sub>ml</i>						x Grab Composite Modified Other:	Water Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other			
	For Lab Use Only	Time:	D.O.	Flow	pH	Spec. Cond.	Temp.						Other:		
(Sample D)	Date:							Grab Composite Modified Other:	Water Soil Organic Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C (None) Disinfected Other			
	For Lab Use Only	Time:	D.O.	Flow	pH	Spec. Cond.	Temp.						Other:		
Relinquished By: <i>[Signature]</i>								Received By: <i>[Signature]</i>				Date: 1-29-10		Time: 1129	
Relinquished By:								Received By:				Date:		Time:	
Relinquished By:								Received By:				Date:		Time:	

Sample I.D. Letter	Site Description				
<b>Sample A</b> 1000501	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	Buchanan	FEPa8	NJ10TSF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Sample from well head Loc. 102 Applied Speciation Bottle # B02367mc				F
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
				EPE (meters)	Parcel 3383
				PDOP	
<b>Sample B</b> 1000502	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	Buchanan		
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Field Blank Applied Speciation Bottle # B02363mc				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
				EPE (meters)	Parcel 3383
				PDOP	
<b>Sample C</b> 1000503	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	Buchanan		
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Duplicate Applied Speciation Bottle # B02391mc				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
				EPE (meters)	Parcel 3383
				PDOP	
<b>Sample D</b>	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
				EPE (meters)	
				PDOP	
REMARKS:					



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LABORATORY ORDER ID: 100202002

Collector's Name: <u>Sean Counihan</u>								Description of Shipment			
Affiliation: <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> (circle one) <u>DGLS</u> <u>HWP</u> Other:								Shipped-Carrier: Tape sealed and initialed x Hand Delivered			
								No. Of Containers: <u>4</u>			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
									Matrix	Container	Preserved	
1000300 (Sample A)	Date: 1-27-10	Hexavalent Chromium, % moisture MS						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: 1435	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14289									Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000301 (Sample B)	Date: 1-27-10	Hexavalent Chromium, % moist M						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: 1440	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14290									Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000302 (Sample C)	Date: 1-27-10	Hexavalent Chromium, % moist M						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: 1449	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14291									Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000303 (Sample D)	Date: 1-27-10	Hexavalent Chromium, % moist M						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: 1457	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14292									Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other

Relinquished By: <u>[Signature]</u>	Received By: <u>Kenneth Hannon</u>	Date: <u>2/2/10</u>	Time: <u>11:15</u>
Relinquished By: <u>Kenneth Hannon</u>	Received By: <u>Derek Rudez</u>	Date: <u>2/2/10</u>	Time: <u>1156</u>
Relinquished By:	Received By:	Date:	Time:

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	319
				<input type="checkbox"/> PDOP	
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	319
				<input type="checkbox"/> PDOP	
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	319
				<input type="checkbox"/> PDOP	
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	319
				<input type="checkbox"/> PDOP	
REMARKS:					
HWP: Michael Stroh					
RUN LAB Dup ON 1000300					



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LABORATORY ORDER ID:

100202002

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<b>Collector's Name:</b> (Please Print) <u>Sean Couihan</u>								<b>Description of Shipment</b> Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered			
<b>Affiliation:</b> (circle one) <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> DGLS <u>DWP</u> Other: _____								No. Of Containers: <u>4</u>			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
									Matrix	Container		Preserved
1000304 (Sample A)	Date: 1-27-10	Hexavalent Chromium, 90 moist m.s.						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
								Modified	Organic	2 oz glass	Nalgene	NAOH
								Other:	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time: /	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Other:	VOA vial	500mL	4° C (None)
AB14293										Encore	250mL	Disinfected
										Other:		Other
1000305 (Sample B)	Date: 1-27-10	Hexavalent Chromium, 90 moist, m.s.						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
								Modified	Organic	2 oz glass	Nalgene	NAOH
								Other:	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time: 1026	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Other:	VOA vial	500mL	4° C (None)
AB14294										Encore	250mL	Disinfected
										Other:		Other
1000306 (Sample C)	Date: 1-27-10	Hexavalent Chromium 90, moist m.s.						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
								Modified	Organic	2 oz glass	Nalgene	NAOH
								Other:	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time: 1037	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Other:	VOA vial	500mL	4° C (None)
AB14295										Encore	250mL	Disinfected
										Other:		Other
1000307 (Sample D)	Date: 1-27-10	Hexavalent Chromium, 90 moist m.s.						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
								Modified	Organic	2 oz glass	Nalgene	NAOH
								Other:	Sludge	8 oz glass	1L	HCL
For Lab Use Only	Time: 1046	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Other:	VOA vial	500mL	4° C (None)
AB14296										Encore	250mL	Disinfected
										Other:		Other

Relinquished By: <u>[Signature]</u>	Received By: <u>Kenneth Hammon</u>	Date: <u>2/2/10</u>	Time: <u>11:15</u>
Relinquished By: <u>Kenneth Hammon</u>	Received By: <u>Dave Phillips</u>	Date: <u>2/2/10</u>	Time: <u>11:57</u>
Relinquished By: _____	Received By: _____	Date: _____	Time: _____



Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	319	
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	305	
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	305	
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	305	
REMARKS: HWP: Michael Stroh  RUN LAB Dup on 1000304					



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LABORATORY ORDER ID: 100202002

Collector's Name: <u>Sean Counihan</u> (Please Print)								Description of Shipment			
Affiliation: <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS <u>HWP</u> Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered			
								No. Of Containers: <u>4</u>			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
		Matrix	Container	Preserved								
1000308 (Sample A)	Date: 1-27-10	Hexavalent Chromium, 90 moist MS						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: /	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14298									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4°C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000309 (Sample B)	Date: 1-26-10	Hexavalent Chromium 90 moist MS						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: 1150	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14298									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4°C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000310 (Sample C)	Date: 1-26-10	Hexavalent Chromium 90 moist MS						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: 1202	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14299									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4°C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000311 (Sample D)	Date: 1-26-10	Hexavalent Chromium 90 moist MS						Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time: 1122	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer		HNO <sub>3</sub>
AB14300									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4°C (None)
										Encore	250mL	Disinfected
										Other:		Other

Relinquished By: <u>Sean Counihan</u>	Received By: <u>Kenneth Hannon</u>	Date: <u>2/2/10</u>	Time: <u>11:15</u>
Relinquished By: <u>Kenneth Hannon</u>	Received By: <u>Dunk Ruffin</u>	Date: <u>2/2/10</u>	Time: <u>1158</u>
Relinquished By: _____	Received By: _____	Date: _____	Time: _____

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	305
				<input type="checkbox"/> PDOP	
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	320
				<input type="checkbox"/> PDOP	
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	320
				<input type="checkbox"/> PDOP	
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	320
				<input type="checkbox"/> PDOP	
REMARKS:					
HWP: Michael Stroh					



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID:

100202002

B31

Collector's Name: <u>Sean Courihan</u> (Please Print)								Description of Shipment					
Affiliation: <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> (circle one) <u>DGLS</u> <u>HWP</u> Other:								Shipped-Carrier: Tape sealed and initialed <input checked="" type="checkbox"/> Hand Delivered					
								No. Of Containers: <u>4</u>					
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only				
									Matrix	Container		Preserved	
1000312 (Sample A)	Date: 1-26-10	Hexavalent Chromium, 8 Moist m <sup>s</sup>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>	
								Modified	Organic	2 oz glass	Nalgene	NAOH	
								Other:	Sludge	8 oz glass	1L	HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Other:	VOA vial	500mL	4°C (None)	
AB14302	1134									Encore	250mL	Disinfected	
										Other:		Other	
1000313 (Sample B)	Date: 1-26-10	Hexavalent Chromium, 70 Moist m <sup>s</sup>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>	
								Modified	Organic	2 oz glass	Nalgene	NAOH	
								Other:	Sludge	8 oz glass	1L	HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:			VOA vial	500mL	4°C (None)	
AB14302	/									Encore	250mL	Disinfected	
										Other:		Other	
1000314 (Sample C)	Date: 1-26-10	Hexavalent Chromium, 70 Moist m <sup>s</sup>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>	
								Modified	Organic	2 oz glass	Nalgene	NAOH	
								Other:	Sludge	8 oz glass	1L	HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:			VOA vial	500mL	4°C (None)	
AB14303	0930									Encore	250mL	Disinfected	
										Other:		Other	
1000315 (Sample D)	Date: 1-26-10	Hexavalent Chromium, 70 Moist m <sup>s</sup>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>	
								Modified	Organic	2 oz glass	Nalgene	NAOH	
								Other:	Sludge	8 oz glass	1L	HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:			VOA vial	500mL	4°C (None)	
AB14304	0910									Encore	250mL	Disinfected	
										Other:		Other	
Relinquished By: <u>[Signature]</u>		Received By: <u>Kenneth Hannon</u>						Date: <u>2/2/10</u>	Time: <u>11:15</u>				
Relinquished By: <u>Kenneth Hannon</u>		Received By: <u>[Signature]</u>						Date: <u>2/2/10</u>	Time: <u>11:59</u>				
Relinquished By:		Received By:						Date:	Time:				

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y4</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): <input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing		Accuracy (check one)	Sample Reference ID:	
			<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>320</b>	
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Du IS</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): <input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing		Accuracy (check one)	Sample Reference ID:	
			<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>320</b>	
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y1</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): <input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing		Accuracy (check one)	Sample Reference ID:	
			<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>325</b>	
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y2</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only): <input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing		Accuracy (check one)	Sample Reference ID:	
			<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>325</b>	
REMARKS: HWP: Michael Stroh  <b>RUN LAB Dup to 1000315</b>					



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FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: 100202002

Collector's Name: Pam Backler (Please Print)								Description of Shipment				
Affiliation: <input checked="" type="radio"/> ESP <input type="radio"/> KCRO <input checked="" type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input checked="" type="radio"/> HWP <input type="radio"/> Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered				
								No. Of Containers: 4				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
	Date:	Hexavalent Chromium, 70 moist m's						Grab	Matrix	Container	Preserved	
1000316 (Sample A)	1-26-10							<input checked="" type="checkbox"/> Composite	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14305	0900							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4°C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
1000317 (Sample B)	1-26-10							Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14306	0920							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4°C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
1000318 (Sample C)	1-26-10							Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14307	/							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4°C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
1000319 (Sample D)	1-26-10							Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14308	0940							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4°C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
Relinquished By: Pam Backler		Received By: Kenneth Hannon						Date: 2/2/10	Time: 11:15			
Relinquished By: Kenneth Hannon		Received By: Don L. Runk						Date: 2/2/10	Time: 1200			
Relinquished By:		Received By:						Date:	Time:			

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y3</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>325</b>	
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y4</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>325</b>	
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Du IS</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>325</b>	
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y1</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>326</b>	
REMARKS: HWP: Michael Stroh					





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FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: 100202002

Collector's Name: (Please Print) <b>PAM HACKLER</b>								Description of Shipment				
Affiliation: (circle one) <b>ESP</b> <b>KCRO</b> <b>NERO</b> <b>SERO</b> <b>SLRO</b> <b>SWRO</b> <b>WPP</b> <b>DGLS</b> <b>HWP</b> Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered				
								No. Of Containers: <b>4</b>				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
									Matrix	Container	Preserved	
<b>1000320</b> (Sample A)	Date: <b>1-26-10</b>	Hexavalent Chromium <b>% moist m<sup>s</sup></b>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: <b>0950</b>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
<b>Ab14309</b>								Other:	Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
<b>1000321</b> (Sample B)	Date: <b>1-26-10</b>	Hexavalent Chromium <b>% moist m<sup>s</sup></b>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: <b>1000</b>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
<b>Ab14310</b>								Other:	Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
<b>1000322</b> (Sample C)	Date: <b>1-26-10</b>	Hexavalent Chromium <b>% moist m<sup>s</sup></b>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: <b>1010</b>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
<b>Ab14312</b>								Other:	Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
<b>1000323</b> (Sample D)	Date: <b>1-26-10</b>	Hexavalent Chromium <b>% moist m<sup>s</sup></b>						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only	Time: <b>—</b>	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
<b>Ab1431A</b>								Other:	Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
Relinquished By: <b>Pam Hackler</b>		Received By: <b>Kenneth Hannon</b>						Date: <b>2/2/10</b>	Time: <b>11:15</b>			
Relinquished By: <b>Kenneth Hannon</b>		Received By: <b>Dan R. Long</b>						Date: <b>2/2/10</b>	Time: <b>1201</b>			
Relinquished By:		Received By:						Date:	Time:			



Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y3				
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y4				
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	DUIS				

Sample I.D. Letter	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting		<input type="checkbox"/> EPE (meters)	326
	<input type="checkbox"/> Northing		<input type="checkbox"/> PDOP	

Sample I.D. Letter	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting		<input type="checkbox"/> EPE (meters)	326
	<input type="checkbox"/> Northing		<input type="checkbox"/> PDOP	

Sample I.D. Letter	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting		<input type="checkbox"/> EPE (meters)	326
	<input type="checkbox"/> Northing		<input type="checkbox"/> PDOP	

Sample I.D. Letter	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):	Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting		<input type="checkbox"/> EPE (meters)	326
	<input type="checkbox"/> Northing		<input type="checkbox"/> PDOP	

REMARKS:				
HWP: Michael Stroh				
Run LAB Dup on 1800321				



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: 160202002

B31

Collector's Name: <b>PAM HACKLER</b> (Please Print)								Description of Shipment				
Affiliation: <input checked="" type="radio"/> ESH <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input checked="" type="radio"/> HWP <input type="radio"/> Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered				
								No. Of Containers: <b>4</b>				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
	Date:	Hexavalent Chromium, 70 moist ms							Matrix:	Container	Preserved	
<b>1000324</b> (Sample A)	<b>1-27-10</b>							Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
<b>AB14313</b>	<b>0820</b>							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
<b>1000325</b> (Sample B)	<b>1-27-10</b>							Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
<b>AB14314</b>	<b>0835</b>							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
<b>1000326</b> (Sample C)	<b>1-27-10</b>							Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
<b>AB14315</b>	<b>0850</b>							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
<b>1000327</b> (Sample D)	<b>1-27-10</b>							Grab <input checked="" type="checkbox"/> Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
<b>AB14316</b>	<b>/</b>							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
Relinquished By: <b>Pam Hackler</b>		Received By: <b>Kenneth Hannon</b>						Date: <b>2/2/10</b>	Time: <b>1115</b>			
Relinquished By: <b>Kenneth Hannon</b>		Received By: <b>Dan Rindgen</b>						Date: <b>2/2/10</b>	Time: <b>1202</b>			
Relinquished By:		Received By:						Date:	Time:			

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y3				
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Du IS				

## REMARKS:

HWP: Michael Stroff



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: 100202002

Collector's Name: <b>PAM HACKLER</b> (Please Print)								Description of Shipment							
Affiliation: <input checked="" type="radio"/> ESP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input checked="" type="radio"/> DGLS <input checked="" type="radio"/> HWP Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered							
								No. Of Containers: <b>4</b>							
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only						
									Matrix	Container	Preserved				
1000328 (Sample A)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
For Lab Use Only	Time: 1525	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH			
									Sludge	8 oz glass	1L	HCL			
									Other:	VOA vial	500mL	4° C (None)			
										Encore	250mL	Disinfected			
										Other:		Other			
1000329 (Sample B)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
For Lab Use Only	Time: 1530	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH			
									Sludge	8 oz glass	1L	HCL			
									Other:	VOA vial	500mL	4° C (None)			
										Encore	250mL	Disinfected			
										Other:		Other			
1000330 (Sample C)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
For Lab Use Only	Time: 1535	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH			
									Sludge	8 oz glass	1L	HCL			
									Other:	VOA vial	500mL	4° C (None)			
										Encore	250mL	Disinfected			
										Other:		Other			
1000331 (Sample D)	Date: 1-26-10	Hexavalent Chromium, % moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
For Lab Use Only	Time: 1545	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Organic	2 oz glass	Nalgene	NAOH			
									Sludge	8 oz glass	1L	HCL			
									Other:	VOA vial	500mL	4° C (None)			
										Encore	250mL	Disinfected			
										Other:		Other			
Relinquished By: <i>Kenith A. Decker</i>								Received By: <i>Kenneth Hannon</i>				Date: 2/2/10		Time: 11:15	
Relinquished By: <i>Kenneth Hannon</i>								Received By: <i>Frank Pulgar</i>				Date: 2/2/10		Time: 1203	
Relinquished By:								Received By:				Date:		Time:	

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y3				
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y4				

## REMARKS:

HWP: Michael Stroh

RUN LAB Dup on 1000329



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID: 100202002

Collector's Name: Sean Cornihan (Please Print)								Description of Shipment				
Affiliation: <input checked="" type="radio"/> ESP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input checked="" type="radio"/> HWP <input type="radio"/> Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered				
								No. Of Containers: 4				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
	Date:	Hexavalent Chromium, 70 moist ms						Grab	Matrix:	Container:	Preserved:	
1006333 (Sample A)	1-26-10							<input checked="" type="checkbox"/> Composite	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14322	✓							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
1000334 (Sample B)	1-27-10	Hexavalent Chromium, 70 moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14322	1435							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
1000335 (Sample C)	1-27-10	Hexavalent Chromium, 70 moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14323	1440							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
1000336 (Sample D)	1-27-10	Hexavalent Chromium, 70 moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Soil	Cubitainer		HNO <sub>3</sub>	
AB14324	1449							Organic	2 oz glass	Nalgene	NAOH	
								Sludge	8 oz glass	1L	HCL	
								Other:	VOA vial	500mL	4° C (None)	
									Encore	250mL	Disinfected	
									Other:		Other	
Relinquished By: [Signature]		Received By: Kenneth Hannon						Date: 2/2/10	Time: 11:15			
Relinquished By: Kenneth Hannon		Received By: Dunk [Signature]						Date: 2/2/10	Time: 1204			
Relinquished By:		Received By:						Date:	Time:			

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Due IS				
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y1				
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y3				

## REMARKS:

HWP: Michael Stroh\*

Run LAB Dup on 1000333





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID:

100202002

Collector's Name: (Please Print) <u>Sean Counihan</u>								Description of Shipment				
Affiliation: <u>(ESP)</u> KCRO <u>(HWP)</u> NPRO SERO SLRO SWRO WPP (circle one) DGLS Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ x Hand Delivered _____				
								No. Of Containers: <u>4</u>				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
	Date:								Matrix	Container	Preserved	
1000337 (Sample A)	1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									Soil	Cubitainer		HNO <sub>3</sub>
									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
AB14325	1457											
1000338 (Sample B)	1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									Soil	Cubitainer		HNO <sub>3</sub>
									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
AB14326	-											
1000339 (Sample C)	1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									Soil	Cubitainer		HNO <sub>3</sub>
									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
AB14328	1430											
1000340 (Sample D)	1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
									Soil	Cubitainer		HNO <sub>3</sub>
									Organic	2 oz glass	Nalgene	NAOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:					
AB14329	1434											
Relinquished By: <u>[Signature]</u>		Received By: <u>Kenneth Hannon</u>						Date: <u>2/2/10</u>	Time: <u>11:15</u>			
Relinquished By: <u>Kenneth Hannon</u>		Received By: <u>Dunk Burge</u>						Date: <u>2/2/10</u>	Time: <u>1205</u>			
Relinquished By:		Received By:						Date:	Time:			



Sample I.D. Letter	Site Description				
Sample A  5	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y4</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>301</b>	
Sample B  6	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>D U I S</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>301</b>	
Sample C  7	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y1</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>304</b>	
Sample D  8	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y1 duplicate #1</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>304</b>	

## REMARKS:

HWP: Michael Stroh

RUN LAB Dup ON 1000338



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

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LABORATORY ORDER ID:

100202002

B31

<b>Collector's Name:</b> (Please Print) <u>Ken Hannon</u>								<b>Description of Shipment</b>					
<b>Affiliation:</b> (circle one) <u>ESP</u> KCRO <u>NERO</u> SERO SLRO SWRO WPP DGLS <u>HWP</u> Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered					
								No. Of Containers: <u>4</u>					
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only				
	Date:	Hexavalent Chromium, 70 moist ms						Grab	Matrix:	Container	Preserved		
1000341 (Sample A)	1-27-10							<input checked="" type="checkbox"/> Composite	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Modified	Soil	Cubitainer		HNO <sub>3</sub>	
AB14329	1438							Other:	Organic	2 oz glass	Nalgene	NaOH	
									Sludge	8 oz glass	1L	HCL	
									Other:	VOA vial	500mL	4° C (None)	
										Encore	250mL	Disinfected	
										Other:		Other	
1000342 (Sample B)	1-27-10	Hexavalent Chromium 70 moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>	
AB14330	1440							Modified	Organic	2 oz glass	Nalgene	NaOH	
								Other:	Sludge	8 oz glass	1L	HCL	
									Other:	VOA vial	500mL	4° C (None)	
										Encore	250mL	Disinfected	
										Other:		Other	
1000343 (Sample C)	1-27-10	Hexavalent Chromium 70 moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>	
AB14332	1450							Modified	Organic	2 oz glass	Nalgene	NaOH	
								Other:	Sludge	8 oz glass	1L	HCL	
									Other:	VOA vial	500mL	4° C (None)	
										Encore	250mL	Disinfected	
										Other:		Other	
1000344 (Sample D)	1-27-10	Hexavalent Chromium 70 moist ms						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>	
AB14332	1500							Modified	Organic	2 oz glass	Nalgene	NaOH	
								Other:	Sludge	8 oz glass	1L	HCL	
									Other:	VOA vial	500mL	4° C (None)	
										Encore	250mL	Disinfected	
										Other:		Other	
Relinquished By:		<u>Kenneth Hannon</u>						Received By:		<u>Dunk Burger</u>		Date:	<u>2/2/10</u>
Relinquished By:								Received By:				Date:	
Relinquished By:								Received By:				Date:	

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y1 DUPLICATE #2</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>304</b>	
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y2</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>304</b>	
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y3</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>304</b>	
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y4</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	<b>304</b>	
REMARKS: HWP: Michael Stroh					



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LABORATORY ORDER ID:

100202002

<b>Collector's Name:</b> Ken Hannon / Pam Baerler (Please Print)								<b>Description of Shipment</b>						
<b>Affiliation:</b> <input checked="" type="radio"/> ESP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input checked="" type="radio"/> HWP Other:								<b>Shipped-Carrier:</b>						
								<b>Tape sealed and initialed</b>						
								<b>x Hand Delivered</b>						
								<b>No. Of Containers:</b> 4						
<b>Sample Number</b>	<b>Sample Collected</b>	<b>Analyses</b>						<b>Sample Type</b>	<b>For Lab Use Only</b>					
1000345 (Sample A)	Date: 1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	<b>Matrix</b>	<b>Container</b>	<b>Preserved</b>			
									Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Soil	Cubitainer	HNO <sub>3</sub>			
									Organic	2 oz glass Nalgene	NAOH			
AB14333									Sludge	8 oz glass 1L	HCL			
									Other:	VOA vial 500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000346 (Sample B)	Date: 1-27-10	Hexavalent Chromium 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
									Soil	Cubitainer	HNO <sub>3</sub>			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass Nalgene	NAOH			
									Sludge	8 oz glass 1L	HCL			
AB14334	1500								Other:	VOA vial 500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000347 (Sample C)	Date: 1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
									Soil	Cubitainer	HNO <sub>3</sub>			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass Nalgene	NAOH			
									Sludge	8 oz glass 1L	HCL			
AB14335	1510								Other:	VOA vial 500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			
1000348 (Sample D)	Date: 1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
									Soil	Cubitainer	HNO <sub>3</sub>			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass Nalgene	NAOH			
									Sludge	8 oz glass 1L	HCL			
AB14336	1520								Other:	VOA vial 500mL	4° C (None)			
									Encore	250mL	Disinfected			
									Other:		Other			
Relinquished By:		Kenneth Hannon						Received By:	Derek Butzger		Date:	2/2/10	Time:	1207
Relinquished By:								Received By:			Date:		Time:	
Relinquished By:								Received By:			Date:		Time:	

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>DUIS</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID: <b>304</b>	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP		
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y1</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP		
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y2</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP		
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): <b>Y3</b>				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP		

## REMARKS:

HWP: Michael Stroh

RUN LAB Dup ON 1000345



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LABORATORY ORDER ID: 100202002

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<b>Collector's Name:</b> (Please Print) <u>PAM HACKLER / SEAN CANNON</u>								<b>Description of Shipment</b>			
<b>Affiliation:</b> (circle one) <u>ESP</u> <u>KCRO</u> <u>NERO</u> <u>SERO</u> <u>SLRO</u> <u>SWRO</u> <u>WPP</u> (circle one) <u>DGLS</u> <u>FWP</u> Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ x Hand Delivered _____			
								No. Of Containers: <u>4</u>			

Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
		Matrix	Container	Preserved								
1000349 (Sample A)	Date: 1-27-10	Hexavalent Chromium, 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	Time: 1530	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only A614338	Time: 1-27-10	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000350 (Sample B)	Date: 1-27-10	Hexavalent Chromium 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	Time: 1530	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only A614338	Time: 1-27-10	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000351 (Sample C)	Date: 1-27-10	Hexavalent Chromium 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	Time: 1254	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only A614339	Time: 1-27-10	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other
1000352 (Sample D)	Date: 1-27-10	Hexavalent Chromium 70 moist ms						Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>
	Time: 1302	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Soil	Cubitainer		HNO <sub>3</sub>
For Lab Use Only A614340	Time: 1-27-10	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Organic	2 oz glass	Nalgene	NaOH
									Sludge	8 oz glass	1L	HCL
									Other:	VOA vial	500mL	4° C (None)
										Encore	250mL	Disinfected
										Other:		Other

Relinquished By: <u>Pam Hackler</u>	Received By: <u>Kenneth Hannon</u>	Date: <u>2/2/10</u>	Time: <u>1115</u>
Relinquished By: <u>Kenneth Hannon</u>	Received By: <u>Derek Rudoy</u>	Date: <u>2/2/10</u>	Time: <u>1203</u>
Relinquished By: _____	Received By: _____	Date: _____	Time: _____

Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y4				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	303
				<input type="checkbox"/> PDOP	
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	DUTS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	303
				<input type="checkbox"/> PDOP	
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	306
				<input type="checkbox"/> PDOP	
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):				
	Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	<input checked="" type="checkbox"/> Easting <input type="checkbox"/> Northing			<input type="checkbox"/> EPE (meters)	306
				<input type="checkbox"/> PDOP	
REMARKS:					
HWP: Michael Stroh					





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LABORATORY ORDER ID: 100202002

<b>Collector's Name:</b> (Please Print) Sean Caniban								<b>Description of Shipment</b>							
<b>Affiliation:</b> (circle one) <input checked="" type="radio"/> ESP <input type="radio"/> DGLS <input type="radio"/> KCRO <input checked="" type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP Other:								<input type="checkbox"/> Shipped-Carrier: <input type="checkbox"/> Tape sealed and initialed <input checked="" type="checkbox"/> Hand Delivered							
								No. Of Containers: 4							
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only						
	Date:	Hexavalent Chromium							Matrix	Container		Preserved			
1000353 (Sample A)	1-27-10	1% moist m/s						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
								Modified	Organic	2 oz glass	Nalgene	NaOH			
								Other:	Sludge	8 oz glass	1L	HCL			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:		Other:	VOA vial	500mL	4° C (None)			
AB14342	1310									Encore	250mL	Disinfected			
										Other:		Other			
1000354 (Sample B)	1-27-10	1% moist m/s						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
								Modified	Organic	2 oz glass	Nalgene	NaOH			
								Other:	Sludge	8 oz glass	1L	HCL			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:			VOA vial	500mL	4° C (None)			
AB14342	/									Encore	250mL	Disinfected			
										Other:		Other			
1000355 (Sample C)	1-26-10	1% moist m/s						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
								Modified	Organic	2 oz glass	Nalgene	NaOH			
								Other:	Sludge	8 oz glass	1L	HCL			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:			VOA vial	500mL	4° C (None)			
AB14343	1610									Encore	250mL	Disinfected			
										Other:		Other			
1000356 (Sample D)	1-26-10	9% moist m/s						Grab	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>			
								<input checked="" type="checkbox"/> Composite	Soil	Cubitainer		HNO <sub>3</sub>			
								Modified	Organic	2 oz glass	Nalgene	NaOH			
								Other:	Sludge	8 oz glass	1L	HCL			
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:			VOA vial	500mL	4° C (None)			
AB14344	1615									Encore	250mL	Disinfected			
										Other:		Other			
Relinquished By:		Sean Caniban						Received By:		Kenneth Hannon		Date:	2/2/10	Time:	1115
Relinquished By:		Kenneth Hannon						Received By:		Dwight Rudz		Date:	2/2/10	Time:	1209
Relinquished By:								Received By:				Date:		Time:	



Sample I.D. Letter	Site Description				
Sample A	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y3				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	306	
Sample B	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): DUIS				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	306	
Sample C	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y1				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	302	
Sample D	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: <b>FEP A8</b>	Job Code: <b>NJ10 TSFF</b>
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): Y2				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy (check one)	Sample Reference ID:	
	<input checked="" type="checkbox"/> Easting <input checked="" type="checkbox"/> Northing		<input type="checkbox"/> EPE (meters) <input type="checkbox"/> PDOP	302	

## REMARKS:

HWP: Michael Stroh



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LABORATORY ORDER ID: 100202002

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<b>Collector's Name:</b> Sean Counihan (Please Print)								<b>Description of Shipment</b>					
<b>Affiliation:</b> <input checked="" type="radio"/> ESP <input type="radio"/> KCRO <input type="radio"/> NERO <input type="radio"/> SERO <input type="radio"/> SLRO <input type="radio"/> SWRO <input type="radio"/> WPP (circle one) <input type="radio"/> DGLS <input checked="" type="radio"/> HWP Other:								<b>Shipped-Carrier:</b> Tape sealed and initialed <input checked="" type="checkbox"/> Hand Delivered					
								<b>No. Of Containers:</b> 4					
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only				
									Matrix	Container		Preserved	
1000357 (Sample A)	1-26-10	Hexavalent Chromium 1% moist m/s						Grab <input checked="" type="checkbox"/> Composite Modified	Water <input type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C(None) Disinfected Other	
For Lab Use Only AB14345	1625	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
1000358 (Sample B)	1-26-10	Hexavalent Chromium 0% moist m/s						Grab <input checked="" type="checkbox"/> Composite Modified	Water <input type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C(None) Disinfected Other	
For Lab Use Only AB14346	1647	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
1000359 (Sample C)	1-26-10	Hexavalent Chromium 0% moist m/s						Grab <input checked="" type="checkbox"/> Composite Modified	Water <input type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C(None) Disinfected Other	
For Lab Use Only AB14347	1650	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
1000360 (Sample D)	1-26-10	Hexavalent Chromium 0% moist m/s						Grab <input checked="" type="checkbox"/> Composite Modified	Water <input type="checkbox"/> Soil <input type="checkbox"/> Organic <input type="checkbox"/> Sludge Other:	1L amber Cubitainer 2 oz glass 8 oz glass VOA vial Encore Other:	120 mL Nalgene 1L 500mL 250mL	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL 4° C(None) Disinfected Other	
For Lab Use Only AB14348		D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:					
Relinquished By: [Signature]		Received By: Kenneth Hannon						Date: 2/2/10	Time: 11:15				
Relinquished By: Kenneth Hannon		Received By: [Signature]						Date: 2/2/10	Time: 12:10				
Relinquished By:		Received By:						Date:	Time:				

Sample I.D. Letter	Site Description					
Sample A	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	Y3					
Sample B	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	Y3 DUPLICATE #2					
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	Y3 DUPLICATE #2					
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEP A8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	Du IS					

REMARKS:	
HWP: Michael Stroh	RUN LAB Dup ON 1000357



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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LABORATORY ORDER ID: 100203001

Collector's Name: <b>PAM HACKLER</b> (Please Print)								Description of Shipment				
Affiliation: <input checked="" type="radio"/> ESP    KCRO    NERO    SERO    SLRO    SWRO    WPP (circle one)    DGLS    HWP    Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ <input checked="" type="checkbox"/> Hand Delivered    No. Of Containers: <b>4</b>				
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only			
	Date:	Hexavalent Chromium Percent Moisture							Matrix	Container		Preserved
<b>1000361</b> <b>(Sample A)</b>	<b>1-26-10</b>							<input checked="" type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge	<input checked="" type="checkbox"/> 1L amber Cubitainer 2 oz glass Nalgene <input checked="" type="checkbox"/> 8 oz glass 1L	<input checked="" type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	<input checked="" type="checkbox"/> 4° C (None)
<b>AB14350</b>	<b>1057</b>								Encore	250mL		Disinfected Other
<b>1000362</b> <b>(Sample B)</b>	<b>1-26-10</b>							<input checked="" type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge	<input checked="" type="checkbox"/> 1L amber Cubitainer 2 oz glass Nalgene <input checked="" type="checkbox"/> 8 oz glass 1L	<input checked="" type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	<input checked="" type="checkbox"/> 4° C (None)
<b>AB14351</b>	<b>0946</b>								Encore	250mL		Disinfected Other
<b>1000363</b> <b>(Sample C)</b>	<b>1-26-10</b>							<input checked="" type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge	<input checked="" type="checkbox"/> 1L amber Cubitainer 2 oz glass Nalgene <input checked="" type="checkbox"/> 8 oz glass 1L	<input checked="" type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	<input checked="" type="checkbox"/> 4° C (None)
<b>AB14352</b>	<b>1200</b>								Encore	250mL		Disinfected Other
<b>1000364</b> <b>(Sample D)</b>	<b>1-26-10</b>							<input checked="" type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite Modified	<input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil Organic Sludge	<input checked="" type="checkbox"/> 1L amber Cubitainer 2 oz glass Nalgene <input checked="" type="checkbox"/> 8 oz glass 1L	<input checked="" type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> NAOH HCL	
For Lab Use Only	Time:	D.O	Flow	pH	Spec. Cond.	Temp.	Other:	Other:	Other:	VOA vial	500mL	<input checked="" type="checkbox"/> 4° C (None)
<b>AB14353</b>	<b>1150</b>								Encore	250mL		Disinfected Other
Relinquished By: <i>Pam Hackler</i>		Received By: <i>infant</i>						Date: <b>2-2-10</b>	Time: <b>1630</b>			
Relinquished By: <i>infant</i>		Received By: <i>Breda Mace</i>						Date: <b>2.2.10</b>	Time: <b>16:38</b>			
Relinquished By:		Received By:						Date:	Time:			

Sample I.D. Letter	Site Description				
Sample A  50	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SU 102.02				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters) PDOP	218
Sample B  51	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SU <del>218</del> 87.04				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters) PDOP	218
Sample C  52	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SU 59.09				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters) PDOP	207
Sample D  53	Facility ID:	Site/Study Name: Tannery Sludge Farm Fields	County: (Multiple)	LDPR Code: FEPA8	Job Code: NJ10 TSFF
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SU 59.07				
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:
	X Easting	Y Northing		EPE (meters) PDOP	202
REMARKS: HWP: Michael Stroh EXPIDITED 48 HR TURNAROUND					



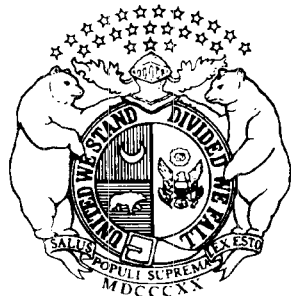
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FIELD SHEET AND CHAIN-OF-CUSTODY RECORD

Page 1 of 2

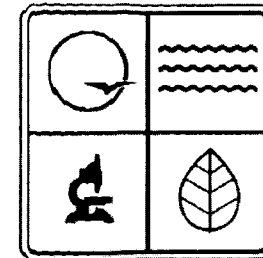
LABORATORY ORDER ID: 100203001

Collector's Name: <u>PAM HACKLER</u> (Please Print)								Description of Shipment						
Affiliation: <u>ESP</u> KCRO NERO SERO SLRO SWRO WPP (circle one) DGLS HWP Other:								Shipped-Carrier: _____ Tape sealed and initialed _____ x Hand Delivered _____						
								No. Of Containers: <u>2</u>						
Sample Number	Sample Collected	Analyses						Sample Type	For Lab Use Only					
									Matrix	Container		Preserved		
1000365 (Sample A)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						x Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
									Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only AB14354	Time: 1310	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
								Sludge	8 oz glass	1L	HCL			
								Other:	Other:	VOA vial	500mL	4° C(None)		
									Encore	250mL	Disinfected			
1000366 (Sample B)	Date: 1-26-10	Hexavalent Chromium Percent Moisture						ms x Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
									Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only AB14355	Time: 1330	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
								Sludge	8 oz glass	1L	HCL			
								Other:	Other:	VOA vial	500mL	4° C(None)		
									Encore	250mL	Disinfected			
1000367 (Sample C)	Date:	Hexavalent Chromium Percent Moisture						ms x Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
									Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
								Sludge	8 oz glass	1L	HCL			
								Other:	Other:	VOA vial	500mL	4° C(None)		
									Encore	250mL	Disinfected			
(Sample D)	Date:	Hexavalent Chromium Percent Moisture						ms x Grab x Composite Modified	Water	1L amber	120 mL	H <sub>2</sub> SO <sub>4</sub>		
									Soil	Cubitainer		HNO <sub>3</sub>		
For Lab Use Only	Time:	D.O.	Flow	pH	Spec. Cond.	Temp.	Other:	Organic	2 oz glass	Nalgene	NAOH			
								Sludge	8 oz glass	1L	HCL			
								Other:	Other:	VOA vial	500mL	4° C(None)		
									Encore	250mL	Disinfected			
Relinquished By: <u>[Signature]</u>		Received By: <u>[Signature]</u>						Date: 2-2-10		Time: 1630				
Relinquished By: <u>[Signature]</u>		Received By: <u>Breida Mare</u>						Date: 2.2.10		Time: 16:38				
Relinquished By:		Received By:						Date:		Time:				

Sample I.D. Letter	Site Description					
Sample A  54	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SC 79.03					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	202	
				PDOP		
Sample B  55	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.): SC 146.08					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)	218	
				PDOP		
Sample C	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)		
				PDOP		
Sample D	Facility ID:	Site/Study Name:	County:	LDPR Code:	Job Code:	
		Tannery Sludge Farm Fields	(Multiple)	FEPA8	NJ10 TSFF	
	Sample Comment (briefly describe where and how the sample was collected, station number, sample type, etc.):					
	GPS Coordinates (Record Coordinates in UTM Zone 15 NAD 83 Only):		Accuracy	(check one)	Sample Reference ID:	
	X Easting	Y Northing		EPE (meters)		
				PDOP		
REMARKS: HWP: Michael Stroh  EXPIDITED <u>48 HR</u> TURN AROUND						



Missouri Department of Natural Resources  
Environmental Services Program



Order ID 100211001

Program, Contact: HWP Julieann Warren

Report Date: 03/18/2010

LDPR/JobCode: FEPA8 / NJ10TSFF



Sample: AB14404



Customer #: 1000354

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 59 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 202

Affiliation: ESP

Collect Date: 1/26/2010 2:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	11700000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	24400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	527000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	1340		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	35700		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.61	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	449	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.82		%	3,421	Infrared Drying
pH	pH	6.28	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.4	04	%	3,993	Contract Lab Dep

Sample: AB14405



Customer #: 1000355

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 18 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 203

Affiliation: ESP

Collect Date: 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	13400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	13300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	449000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	365	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	36400		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.42	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	433	04	mV	3,991	Contract Lab Dep



**Sample: AB14405****Customer #:** 1000355**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 18 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 203**Affiliation:** ESP**Collect Date:** 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Percent Moisture	Percent Moisture	3.71		%	3,421	Infrared Drying
pH	pH	6.85	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.1	04	%	3,993	Contract Lab Dep

**Sample: AB14406****Customer #:** 1000356**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 42 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 204**Affiliation:** ESP**Collect Date:** 1/27/2010 12:56:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	18300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	25000000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	334000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	815		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	45100		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.67	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	465	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.15		%	3,421	Infrared Drying
pH	pH	7.86	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.9	04	%	3,993	Contract Lab Dep

**Sample: AB14407****Customer #:** 1000357**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 96 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 205**Affiliation:** ESP**Collect Date:** 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	34300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	410000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2070		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31900		ug/kg	3,884	SW 846 6010B

**Sample: AB14407****Customer #: 1000357****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 96 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 205**Affiliation:** ESP**Collect Date:** 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.05	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	477	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	5.48		%	3,421	Infrared Drying
pH	pH	5.90	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.5	04	%	3,993	Contract Lab Dep

**Sample: AB14408****Customer #: 1000358****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 109 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 209**Affiliation:** ESP**Collect Date:** 1/25/2010 2:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	7440000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	16000000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	649000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	259	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	19900		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.66	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	351	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4		%	3,421	Infrared Drying
pH	pH	7.87	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	0.81	04	%	3,993	Contract Lab Dep

**Sample: AB14409****Customer #: 1000359****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 30 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 210**Affiliation:** ESP**Collect Date:** 1/26/2010 12:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12700000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	16300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	472000		ug/kg	3,884	SW 846 6010B

**Sample: AB14409****Customer #:** 1000359**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 30 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 210**Affiliation:** ESP**Collect Date:** 1/26/2010 12:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Molybdenum	328	05	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	34200		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.22	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	352	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.96		%	3,421	Infrared Drying
pH	pH	7.87	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	0.47	04	%	3,993	Contract Lab Dep

**Sample: AB14410****Customer #:** 1000360**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 53 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 212**Affiliation:** ESP**Collect Date:** 1/27/2010 9:02:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	12600000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Iron	44300000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	585000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	3210		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31400		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.60	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	469	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.02		%	3,421	Infrared Drying
pH	pH	6.61	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.5	04	%	3,993	Contract Lab Dep

**Sample: AB14411****Customer #:** 1000361**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 44 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 213**Affiliation:** ESP**Collect Date:** 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	15000000	09	ug/kg	3,884	SW 846 6010B

**Sample: AB14411****Customer #: 1000361****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 44 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 213**Affiliation:** ESP**Collect Date:** 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Iron	34400000	09	ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	358000		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2310		ug/kg	3,884	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	42200		ug/kg	3,884	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.83	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	407	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.95		%	3,421	Infrared Drying
pH	pH	6.62	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.5	04	%	3,993	Contract Lab Dep

**Sample: AB14412****Customer #: 1000362****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 25 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 214**Affiliation:** ESP**Collect Date:** 1/27/2010 11:18:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	13900000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	55400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	472000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	5310		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	30600	11	ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.61	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	487	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	5.35		%	3,421	Infrared Drying
pH	pH	6.78	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.4	04	%	3,993	Contract Lab Dep

**Sample: AB14413****Customer #: 1000363****Facility ID:**  
**County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 55 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 215**Affiliation:** ESP**Collect Date:** 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16800000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	18300000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	402000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	971		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	50500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	420	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.67		%	3,421	Infrared Drying
pH	pH	6.45	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	4.4	04	%	3,993	Contract Lab Dep

**Sample: AB14414****Customer #: 1000364****Facility ID:**  
**County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 50 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 216**Affiliation:** ESP**Collect Date:** 1/26/2010 3:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	31500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	462000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	1620		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	40500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.69	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	422	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	4.06		%	3,422	Infrared Drying
pH	pH	6.81	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	5.1	04	%	3,993	Contract Lab Dep

**Sample: AB14415****Customer #: 1000365****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 103 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 217**Affiliation:** ESP**Collect Date:** 1/26/2010 12:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	14000000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	40900000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	298000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	3230		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	41900		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.79	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	468	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.36		%	3,422	Infrared Drying
pH	pH	5.91	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	6.4	04	%	3,993	Contract Lab Dep

**Sample: AB14416****Customer #: 1000366****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 146 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 218**Affiliation:** ESP**Collect Date:** 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	16100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	42500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	493000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	2580		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	39300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.83	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	444	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	8.60		%	3,422	Infrared Drying
pH	pH	7.59	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	6.3	04	%	3,993	Contract Lab Dep

**Sample: AB14417****Customer #:** 1000367**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 55 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 219**Affiliation:** ESP**Collect Date:** 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	19100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	21100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	517000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	602		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	45300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.11	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	475	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	3.11		%	3,422	Infrared Drying
pH	pH	6.34	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	1.3	04	%	3,993	Contract Lab Dep

**Sample: AB14418****Customer #:** 1000368**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 150 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 221**Affiliation:** ESP**Collect Date:** 1/25/2010 5:04:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	23600000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	21400000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	356000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	514		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	52500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	3.40	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	434	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.53		%	3,422	Infrared Drying
pH	pH	7.25	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.1	04	%	3,993	Contract Lab Dep

**Sample: AB14419****Customer #: 1000369****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 41 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 222**Affiliation:** ESP**Collect Date:** 1/25/2010 4:58:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	25700000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	23100000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	456000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	701		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	59500		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	3.29	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	422	04	mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.90		%	3,422	Infrared Drying
pH	pH	7.38	04	pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.2	04	%	3,993	Contract Lab Dep

**Sample: AB14420****Customer #: 1000370****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 29 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 202**Affiliation:** ESP**Collect Date:** 1/26/2010 2:44:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	5.5	04	%	4,083	Infrared Drying

**Sample: AB14421****Customer #: 1000371****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 79 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 202**Affiliation:** ESP**Collect Date:** 1/26/2010 2:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.13	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying



**Sample: AB14423****Customer #:** 1000373**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 7 SUIs**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 203**Affiliation:** ESP**Collect Date:** 1/27/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.39	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	4.3	04	%	4,083	Infrared Drying

**Sample: AB14424****Customer #:** 1000374**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 27 SUIs**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 203**Affiliation:** ESP**Collect Date:** 1/27/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

**Sample: AB14426****Customer #:** 1000376**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 99 SUIs**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 204**Affiliation:** ESP**Collect Date:** 1/27/2010 12:56:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.41	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	4,083	Infrared Drying

**Sample: AB14427****Customer #:** 1000377**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 23 SUIs**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 204**Affiliation:** ESP**Collect Date:** 1/27/2010 1:50:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.46	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.0	04	%	4,083	Infrared Drying

**Sample: AB14429****Customer #:** 1000379**Facility ID:**  
**County:** (Multiple)**Collector:** KEN HANNON  
**Sample Comment:** 71 SUIS**Site:** Tannery Sludge Farm Fields  
**Sample Reference ID:** 205**Affiliation:** ESP**Collect Date:** 1/26/2010 11:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

**Sample: AB14430****Customer #:** 1000380**Facility ID:**  
**County:** (Multiple)**Collector:** KEN HANNON  
**Sample Comment:** 34 SUIS**Site:** Tannery Sludge Farm Fields  
**Sample Reference ID:** 205**Affiliation:** ESP**Collect Date:** 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.62	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

**Sample: AB14431****Customer #:** 1000381**Facility ID:**  
**County:** (Multiple)**Collector:** KEN HANNON  
**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields  
**Sample Reference ID:** 205**Affiliation:** ESP**Collect Date:** 1/26/2010 11:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.63	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	4,083	Infrared Drying

**Sample: AB14432****Customer #:** 1000382**Facility ID:**  
**County:** (Multiple)**Collector:** KEN HANNON  
**Sample Comment:** 138 SUIS**Site:** Tannery Sludge Farm Fields  
**Sample Reference ID:** 209**Affiliation:** ESP**Collect Date:** 1/25/2010 2:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.69	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.8	04	%	4,083	Infrared Drying

**Sample: AB14433****Customer #: 1000383****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 144 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 209**Affiliation:** ESP**Collect Date:** 1/25/2010 2:05:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.56	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	4,083	Infrared Drying

**Sample: AB14435****Customer #: 1000385****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 15 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 210**Affiliation:** ESP**Collect Date:** 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.24	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

**Sample: AB14436****Customer #: 1000386****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 62 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 210**Affiliation:** ESP**Collect Date:** 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.80	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

**Sample: AB14438****Customer #: 1000388****Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 16 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 212**Affiliation:** ESP**Collect Date:** 1/27/2010 9:48:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.47	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

**Sample: AB14439****Customer #:** 1000389**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 86 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 212**Affiliation:** ESP**Collect Date:** 1/27/2010 10:30:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.10	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.0	04	%	4,083	Infrared Drying

**Sample: AB14440****Customer #:** 1000390**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 212**Affiliation:** ESP**Collect Date:** 1/27/2010 9:02:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.49	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.0	04	%	4,083	Infrared Drying

**Sample: AB14441****Customer #:** 1000391**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 9 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 213**Affiliation:** ESP**Collect Date:** 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.54	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.6	04	%	4,083	Infrared Drying

**Sample: AB14442****Customer #:** 1000392**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 15 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 213**Affiliation:** ESP**Collect Date:** 1/26/2010 4:26:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.76	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

**Sample: AB14443****Customer #:** 1000393**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 213**Affiliation:** ESP**Collect Date:** 1/26/2010 4:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.70	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

**Sample: AB14444****Customer #:** 1000394**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 53 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 214**Affiliation:** ESP**Collect Date:** 1/27/2010 11:18:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.39	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

**Sample: AB14445****Customer #:** 1000395**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 23 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 214**Affiliation:** ESP**Collect Date:** 1/27/2010 12:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.24	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

**Sample: AB14446****Customer #:** 1000396**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 214**Affiliation:** ESP**Collect Date:** 1/27/2010 11:18:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.36	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.7	04	%	4,083	Infrared Drying

**Sample: AB14447****Customer #:** 1000397**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 82 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 215**Affiliation:** ESP**Collect Date:** 1/27/2010 11:10:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.73	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	4,083	Infrared Drying

**Sample: AB14448****Customer #:** 1000398**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 110 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 215**Affiliation:** ESP**Collect Date:** 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.05	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	4,083	Infrared Drying

**Sample: AB14449****Customer #:** 1000399**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 215**Affiliation:** ESP**Collect Date:** 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.73	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.6	04	%	4,083	Infrared Drying

**Sample: AB14450****Customer #:** 1000400**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 32 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 216**Affiliation:** ESP**Collect Date:** 1/26/2010 3:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.14	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.7	04	%	4,083	Infrared Drying

**Sample: AB14451****Customer #:** 1000401**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 16 SUI5**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 216**Affiliation:** ESP**Collect Date:** 1/26/2010 4:03:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.58	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	4,083	Infrared Drying

**Sample: AB14453****Customer #:** 1000403**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 22 SUI5**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 217**Affiliation:** ESP**Collect Date:** 1/26/2010 1:21:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.55	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%	4,083	Infrared Drying

**Sample: AB14454****Customer #:** 1000404**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 50 SUI5**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 217**Affiliation:** ESP**Collect Date:** 1/26/2010 11:47:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.82	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.5	04	%	4,083	Infrared Drying

**Sample: AB14455****Customer #:** 1000405**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 217**Affiliation:** ESP**Collect Date:** 1/26/2010 12:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.16	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	4,083	Infrared Drying

**Sample: AB14456****Customer #:** 1000406**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 102 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 218**Affiliation:** ESP**Collect Date:** 1/26/2010 10:55:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.19	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.5	04	%	4,083	Infrared Drying

**Sample: AB14457****Customer #:** 1000407**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 87 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 218**Affiliation:** ESP**Collect Date:** 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.81	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	4,083	Infrared Drying

**Sample: AB14459****Customer #:** 1000409**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 42 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 219**Affiliation:** ESP**Collect Date:** 1/26/2010 12:55:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.04	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.0	04	%	4,083	Infrared Drying

**Sample: AB14460****Customer #:** 1000410**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 15 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 219**Affiliation:** ESP**Collect Date:** 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.29	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%	4,083	Infrared Drying



**Sample: AB14462****Customer #:** 1000412**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 164 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 221**Affiliation:** ESP**Collect Date:** 1/25/2010 5:04:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.45	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	4,083	Infrared Drying

**Sample: AB14463****Customer #:** 1000413**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 109 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 221**Affiliation:** ESP**Collect Date:** 1/25/2010 5:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.49	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	4,083	Infrared Drying

**Sample: AB14465****Customer #:** 1000415**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 10 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 222**Affiliation:** ESP**Collect Date:** 1/25/2010 5:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	4,083	Infrared Drying

**Sample: AB14466****Customer #:** 1000416**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 27 SUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 222**Affiliation:** ESP**Collect Date:** 1/25/2010 5:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	4,083	Infrared Drying

Sample: AB14468



Customer #: 1000418

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 19 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 224

Affiliation: ESP

Collect Date: 1/27/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.17	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	4,083	Infrared Drying

Sample: AB14469



Customer #: 1000419

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 23 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 224

Affiliation: ESP

Collect Date: 1/27/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.30	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	4,083	Infrared Drying

Sample: AB14470



Customer #: 1000420

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 74 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 224

Affiliation: ESP

Collect Date: 1/27/2010 9:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.87	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	4,083	Infrared Drying

Sample: AB14472



Customer #: 1000422

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 4 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 223

Affiliation: ESP

Collect Date: 1/26/2010 12:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.23	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	4,083	Infrared Drying

**Sample: AB14473****Customer #:** 1000423**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 28 SUI5**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 223**Affiliation:** ESP**Collect Date:** 1/26/2010 12:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	4,083	Infrared Drying

**Sample: AB14474****Customer #:** 1000424**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** DUIS  
Sample container broken in transit to contract lab. Sample not analyzed.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 223**Affiliation:** ESP**Collect Date:** 1/26/2010 12:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Sample Cancelled	Sample Cancelled	N/A				NA

**Sample: AB14475****Customer #:** 1000425**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 60 SUI5**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 225**Affiliation:** ESP**Collect Date:** 1/26/2010 10:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.52	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	4,083	Infrared Drying

**Sample: AB14476****Customer #:** 1000426**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 8 SUI5**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 225**Affiliation:** ESP**Collect Date:** 1/26/2010 11:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.27	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	4,083	Infrared Drying

Sample: AB14477



Customer #: 1000427

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: DUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 225

Affiliation: ESP

Collect Date: 1/26/2010 10:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.48	04	mg/Kg	3,996	Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%	4,083	Infrared Drying

Sample: AB14478



Customer #: 1000429

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 44 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 223

Affiliation: ESP

Collect Date: 1/26/2010 1:22:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	23500000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	28700000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	854000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	986		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	51300		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	0.47	04	mg/Kg	3,996	Contract Lab Dep
Oxidation Reduction Potential	Oxidation Reduction Potential	415		mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	2.82		%	3,422	Infrared Drying
pH	pH	7.42		pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	2.9		%	3,993	Contract Lab Dep

Sample: AB14479



Customer #: 1000430

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: 32 SUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 225

Affiliation: ESP

Collect Date: 1/26/2010 10:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6010B Metals-Total Recoverable	Aluminum	10800000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Iron	14600000	09	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Manganese	433000		ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Molybdenum	409	05	ug/kg	3,886	SW 846 6010B
6010B Metals-Total Recoverable	Vanadium	31000		ug/kg	3,886	SW 846 6010B
Hexavalent Chromium	Hexavalent Chromium	1.36	04	mg/Kg	3,996	Contract Lab Dep

**Sample: AB14479****Customer #:** 1000430**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** 32 SUI5**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 225**Affiliation:** ESP**Collect Date:** 1/26/2010 10:20:00AM

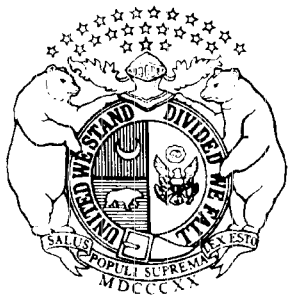
Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Oxidation Reduction Potential	Oxidation Reduction Potential	397		mV	3,991	Contract Lab Dep
Percent Moisture	Percent Moisture	1.61		%	3,422	Infrared Drying
pH	pH	7.66		pH Units	3,992	Contract Lab Dep
Total Organic Carbon	Total Organic Carbon	1.3		%	3,993	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

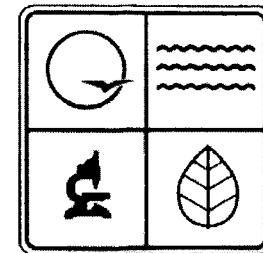
**Qualifier Descriptions**

- |  |   |
|--|---|
| 01 Improper collection method                            | 02 Improper preservation                            |
| 03 Exceeded holding time                                 | 04 Analyzed by Contract Laboratory                  |
| 05 Estimated value, detected below PQL                   | 06 Estimated value, QC data outside limits          |
| 07 Estimated value, analyte outside calibration range    | 08 Analyte present in blank at > 1/2 reported value |
| 09 Sample was diluted during analysis                    | 10 Laboratory error                                 |
| 11 Estimated value, matrix interference                  | 12 Insufficient quantity                            |
| 13 Estimated value, true result is >= reported value     | 14 Estimated value, non-homogeneous sample          |
| 15 No Result - Failed Quality Controls Requirements      | 16 Not analyzed - related analyte not detected      |
| 17 Results in dry weight                                 | 18 Sample pH is outside the acceptable range        |
| 19 Estimated value                                       | 20 Not analyzed - Instrument failure                |
| 21 No result - spectral interference                     | 22 pH was performed at the Laboratory               |
| 23 Contract Lab specific qualifier - see sample comments | 24 No result - matrix interference                  |
| ND Not detected at reported value                        |   |

**Chris Boldt, Laboratory Manager**  
Environmental Services Program  
Field Services Division



Missouri Department of Natural Resources  
Environmental Services Program



Order ID 100203001

Program, Contact: HWP Julieann Warren

Report Date: 02/19/2010

LDPR/JobCode: FEPA8 / NJ10TSFF



Sample: AB14350



Customer #: 1000361

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: SU 102.02. Expedited 48 hour turnaround.

Site: Tannery Sludge Farm Fields

Sample Reference ID: 218

Affiliation: ESP

Collect Date: 1/26/2010 10:57:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.71	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	0.7	04	%		Infrared Drying

Sample: AB14351



Customer #: 1000362

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: SU 87.04. Expedited 48 hour turnaround.

Site: Tannery Sludge Farm Fields

Sample Reference ID: 218

Affiliation: ESP

Collect Date: 1/26/2010 9:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.00	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%		Infrared Drying

Sample: AB14352



Customer #: 1000363

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: SU 59.09. Expedited 48 hour turnaround.

Site: Tannery Sludge Farm Fields

Sample Reference ID: 202

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.76	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	2.7	04	%		Infrared Drying

**Sample: AB14353****Customer #: 1000364****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** SU 59.07. Expedited 48 hour turnaround.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 202**Affiliation:** ESP**Collect Date:** 1/26/2010 11:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	4.88	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%		Infrared Drying

**Sample: AB14354****Customer #: 1000365****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** SU 79.03. Expedited 48 hour turnaround.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 202**Affiliation:** ESP**Collect Date:** 1/26/2010 1:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	2.08	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%		Infrared Drying

**Sample: AB14355****Customer #: 1000366****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** SU 146.08. Expedited 48 hour turnaround.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 218**Affiliation:** ESP**Collect Date:** 1/26/2010 1:30:00PM

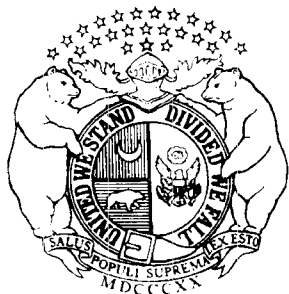
Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	1.59	04	mg/Kg		Contract Lab Dep
Percent Moisture	Percent Moisture	12.5	04	%		Infrared Drying

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

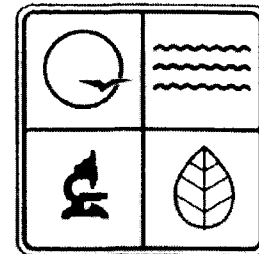
Chris Boldt, Laboratory Manager  
Environmental Services Program  
Field Services Division

**Qualifier Descriptions**

- |   |  |
|---|--|
| 01 Improper collection method                         | 02 Improper preservation                                 |
| 03 Exceeded holding time                              | 04 Analyzed by Contract Laboratory                       |
| 05 Estimated value, detected below PQL                | 06 Estimated value, QC data outside limits               |
| 07 Estimated value, analyte outside calibration range | 08 Analyte present in blank at > 1/2 reported value      |
| 09 Sample was diluted during analysis                 | 10 Laboratory error                                      |
| 11 Estimated value, matrix interference               | 12 Insufficient quantity                                 |
| 13 Estimated value, true result is >= reported value  | 14 Estimated value, non-homogeneous sample               |
| 15 No Result - Failed Quality Controls Requirements   | 16 Not analyzed - related analyte not detected           |
| 17 Results in dry weight                              | 18 Sample pH is outside the acceptable range             |
| 19 Estimated value                                    | 20 Not analyzed - Instrument failure                     |
| 21 No result - spectral interference                  | 22 pH was performed at the Laboratory                    |
| ND Not detected at reported value                     | 23 Contract Lab specific qualifier - see sample comments |



Missouri Department of Natural Resources  
Environmental Services Program



Order ID 100202002

Program, Contact: HWP Julieann Warren

Report Date: 03/09/2010

LDPR/JobCode: FEPA8 / NJ10TSFF



Sample: AB14289



Customer #: 1000300

Facility ID:  
County: (Multiple)

Collector: SEAN COUNIHAN

Sample Comment: Y1. Run lab Dup on this sample.

Site: Tannery Sludge Farm Fields  
Sample Reference ID: 319

Affiliation: ESP

Collect Date: 1/27/2010 2:35:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	< 0.014	ND, 04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	2.6	04	%	3,946	Infrared Drying

Sample: AB14290



Customer #: 1000301

Facility ID:  
County: (Multiple)

Collector: SEAN COUNIHAN

Sample Comment: Y2

Site: Tannery Sludge Farm Fields  
Sample Reference ID: 319

Affiliation: ESP

Collect Date: 1/27/2010 2:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.022	04, 05	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	3,946	Infrared Drying

Sample: AB14291



Customer #: 1000302

Facility ID:  
County: (Multiple)

Collector: SEAN COUNIHAN

Sample Comment: Y3

Site: Tannery Sludge Farm Fields  
Sample Reference ID: 319

Affiliation: ESP

Collect Date: 1/27/2010 2:49:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.019	04, 05	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	4.0	04	%	3,946	Infrared Drying



**Sample: AB14292****Customer #:** 1000303**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y4**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 319**Affiliation:** ESP**Collect Date:** 1/27/2010 2:57:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	11.6	04	%	3,946	Infrared Drying

**Sample: AB14293****Customer #:** 1000304**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** DUIS. Run lab Dup on this sample.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 319**Affiliation:** ESP**Collect Date:** 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	< 0.014	ND, 04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	3.7	04	%	3,946	Infrared Drying

**Sample: AB14294****Customer #:** 1000305**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 305**Affiliation:** ESP**Collect Date:** 1/27/2010 10:26:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.063	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	3,946	Infrared Drying

**Sample: AB14295****Customer #:** 1000306**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 305**Affiliation:** ESP**Collect Date:** 1/27/2010 10:37:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.16	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.5	04	%	3,946	Infrared Drying

**Sample: AB14296****Customer #: 1000307****Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y3**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 305**Affiliation:** ESP**Collect Date:** 1/27/2010 10:46:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.061	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.4	04	%	3,946	Infrared Drying

**Sample: AB14297****Customer #: 1000308****Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 305**Affiliation:** ESP**Collect Date:** 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.066	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	0.3	04	%	3,946	Infrared Drying

**Sample: AB14298****Customer #: 1000309****Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 320**Affiliation:** ESP**Collect Date:** 1/26/2010 11:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.32	04	mg/Kg	3,936	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	3,946	Infrared Drying

**Sample: AB14299****Customer #: 1000310****Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 320**Affiliation:** ESP**Collect Date:** 1/26/2010 12:02:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.035	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	3,947	Infrared Drying

**Sample: AB14300****Customer #: 1000311****Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y3**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 320**Affiliation:** ESP**Collect Date:** 1/26/2010 11:22:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.025	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	0.6	04	%	3,947	Infrared Drying

**Sample: AB14301****Customer #: 1000312****Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y4**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 320**Affiliation:** ESP**Collect Date:** 1/26/2010 11:34:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.29	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	0.8	04	%	3,947	Infrared Drying


**Sample: AB14302****Customer #: 1000313****Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 320**Affiliation:** ESP**Collect Date:** 1/26/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	3,947	Infrared Drying

**Sample: AB14303****Customer #: 1000314****Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 325**Affiliation:** ESP**Collect Date:** 1/26/2010 9:30:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.8	04	%	3,947	Infrared Drying

Sample: AB14304



Customer #: 1000315

Facility ID:

County: (Multiple)

Collector: SEAN COUNIHAN

Sample Comment: Y2. Run lab Dup on this sample.

Site: Tannery Sludge Farm Fields

Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 9:10:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.053	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.5	04	%	3,947	Infrared Drying

Sample: AB14305



Customer #: 1000316

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: Y3

Site: Tannery Sludge Farm Fields

Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 9:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.069	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	6.3	04	%	3,947	Infrared Drying

Sample: AB14306



Customer #: 1000317

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: Y4

Site: Tannery Sludge Farm Fields

Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 9:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.052	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,947	Infrared Drying

Sample: AB14307



Customer #: 1000318

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: DUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 325

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.068	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,947	Infrared Drying

**Sample: AB14308****Customer #: 1000319****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 326**Affiliation:** ESP**Collect Date:** 1/26/2010 9:40:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,937	Contract Lab Dep
Percent Moisture	Percent Moisture	3.4	04	%	3,947	Infrared Drying

**Sample: AB14309****Customer #: 1000320****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 326**Affiliation:** ESP**Collect Date:** 1/26/2010 9:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.098	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.1	04	%	3,948	Infrared Drying

**Sample: AB14310****Customer #: 1000321****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y3. Run lab Dup on this sample.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 326**Affiliation:** ESP**Collect Date:** 1/26/2010 10:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.21	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	3,948	Infrared Drying

**Sample: AB14311****Customer #: 1000322****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y4**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 326**Affiliation:** ESP**Collect Date:** 1/26/2010 10:10:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.28	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	6.1	04	%	3,948	Infrared Drying

**Sample: AB14312****Customer #: 1000323****Facility ID:**  
**County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 326**Affiliation:** ESP**Collect Date:** 1/26/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.22	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.6	04	%	3,948	Infrared Drying

**Sample: AB14313****Customer #: 1000324****Facility ID:**  
**County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 312**Affiliation:** ESP**Collect Date:** 1/27/2010 8:20:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.081	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	1.9	04	%	3,948	Infrared Drying

**Sample: AB14314****Customer #: 1000325****Facility ID:**  
**County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 312**Affiliation:** ESP**Collect Date:** 1/27/2010 8:35:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.094	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	2.1	04	%	3,948	Infrared Drying

**Sample: AB14315****Customer #: 1000326****Facility ID:**  
**County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y3**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 312**Affiliation:** ESP**Collect Date:** 1/27/2010 8:50:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.086	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	5.4	04	%	3,948	Infrared Drying

**Sample: AB14316****Customer #: 1000327****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 312**Affiliation:** ESP**Collect Date:** 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.078	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	2.9	04	%	3,948	Infrared Drying

**Sample: AB14317****Customer #: 1000328****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 313**Affiliation:** ESP**Collect Date:** 1/26/2010 3:25:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.48	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	5.1	04	%	3,948	Infrared Drying

**Sample: AB14318****Customer #: 1000329****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y2. Run lab Dup on this sample.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 313**Affiliation:** ESP**Collect Date:** 1/26/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,938	Contract Lab Dep
Percent Moisture	Percent Moisture	3.3	04	%	3,948	Infrared Drying

**Sample: AB14319****Customer #: 1000330****Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y3**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 313**Affiliation:** ESP**Collect Date:** 1/26/2010 3:35:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.76	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	3.9	04	%	3,949	Infrared Drying

**Sample: AB14320****Customer #: 1000331****Facility ID:**  
**County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y4**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 313**Affiliation:** ESP**Collect Date:** 1/26/2010 3:45:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.20	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	5.8	04	%	3,949	Infrared Drying

**Sample: AB14321****Customer #: 1000333****Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** DUIS. Run lab Dup on this sample.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 313**Affiliation:** ESP**Collect Date:** 1/26/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.18	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	4.4	04	%	3,949	Infrared Drying

**Sample: AB14322****Customer #: 1000334****Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 301**Affiliation:** ESP**Collect Date:** 1/27/2010 2:35:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.059	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	1.4	04	%	3,949	Infrared Drying

**Sample: AB14323****Customer #: 1000335****Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 301**Affiliation:** ESP**Collect Date:** 1/27/2010 2:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	10.3	04	%	3,949	Infrared Drying



**Sample: AB14324****Customer #:** 1000336**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y3**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 301**Affiliation:** ESP**Collect Date:** 1/27/2010 2:49:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.076	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	6.8	04	%	3,949	Infrared Drying

**Sample: AB14325****Customer #:** 1000337**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y4**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 301**Affiliation:** ESP**Collect Date:** 1/27/2010 2:57:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.076	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	6.5	04	%	3,949	Infrared Drying


**Sample: AB14326****Customer #:** 1000338**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** DUIS. Run lab Dup on this sample.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 301**Affiliation:** ESP**Collect Date:** 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.071	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	5.7	04	%	3,949	Infrared Drying

**Sample: AB14327****Customer #:** 1000339**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 304**Affiliation:** ESP**Collect Date:** 1/27/2010 2:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.057	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	2.0	04	%	3,949	Infrared Drying

Sample: AB14328



Customer #: 1000340

Facility ID:

County: (Multiple)

Collector: SEAN COUNIHAN

Sample Comment: Y1, duplicate #1

Site: Tannery Sludge Farm Fields


Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:34:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.054	04	mg/Kg	3,939	Contract Lab Dep
Percent Moisture	Percent Moisture	2.3	04	%	3,949	Infrared Drying

Sample: AB14329



Customer #: 1000341

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: Y1, duplicate #2

Site: Tannery Sludge Farm Fields


Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:38:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.11	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.2	04	%	3,950	Infrared Drying

Sample: AB14330



Customer #: 1000342

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: Y2

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:40:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.061	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	1.8	04	%	3,950	Infrared Drying

Sample: AB14331



Customer #: 1000343

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: Y3

Site: Tannery Sludge Farm Fields

Sample Reference ID: 304

Affiliation: ESP

Collect Date: 1/27/2010 2:50:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.16	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	3,950	Infrared Drying

**Sample: AB14332****Customer #:** 1000344**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** Y4**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 304**Affiliation:** ESP**Collect Date:** 1/27/2010 3:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	6.6	04	%	3,950	Infrared Drying

**Sample: AB14333****Customer #:** 1000345**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** DUIS. Run lab Dup on this sample.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 304**Affiliation:** ESP**Collect Date:** 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.087	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	2.4	04	%	3,950	Infrared Drying


**Sample: AB14334****Customer #:** 1000346**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 303**Affiliation:** ESP**Collect Date:** 1/27/2010 3:00:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.049	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,950	Infrared Drying

**Sample: AB14335****Customer #:** 1000347**Facility ID:****County:** (Multiple)**Collector:** KEN HANNON**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 303**Affiliation:** ESP**Collect Date:** 1/27/2010 3:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.042	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.4	04	%	3,950	Infrared Drying

Sample: AB14336



Customer #: 1000348

Facility ID:

County: (Multiple)

Collector: KEN HANNON

Sample Comment: Y3

Site: Tannery Sludge Farm Fields

Sample Reference ID: 303

Affiliation: ESP

Collect Date: 1/27/2010 3:20:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.058	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	4.9	04	%	3,950	Infrared Drying

Sample: AB14337



Customer #: 1000349

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: Y4

Site: Tannery Sludge Farm Fields


Sample Reference ID: 303

Affiliation: ESP

Collect Date: 1/27/2010 3:30:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.036	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	2.9	04	%	3,950	Infrared Drying

Sample: AB14338



Customer #: 1000350

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: DUIS

Site: Tannery Sludge Farm Fields

Sample Reference ID: 303

Affiliation: ESP

Collect Date: 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.054	04	mg/Kg	3,940	Contract Lab Dep
Percent Moisture	Percent Moisture	3.9	04	%	3,950	Infrared Drying

Sample: AB14339



Customer #: 1000351

Facility ID:

County: (Multiple)

Collector: PAM HACKLER

Sample Comment: Y1

Site: Tannery Sludge Farm Fields

Sample Reference ID: 306

Affiliation: ESP

Collect Date: 1/27/2010 12:54:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.14	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	3,951	Infrared Drying

**Sample: AB14340****Customer #:** 1000352**Facility ID:****County:** (Multiple)**Collector:** PAM HACKLER**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 306**Affiliation:** ESP**Collect Date:** 1/27/2010 1:02:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.21	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	0.9	04	%	3,951	Infrared Drying

**Sample: AB14341****Customer #:** 1000353**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y3**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 306**Affiliation:** ESP**Collect Date:** 1/27/2010 1:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.22	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	5.8	04	%	3,951	Infrared Drying

**Sample: AB14342****Customer #:** 1000354**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 306**Affiliation:** ESP**Collect Date:** 1/27/2010 12:00:00AM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.19	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	2.5	04	%	3,951	Infrared Drying

**Sample: AB14343****Customer #:** 1000355**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y1**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 302**Affiliation:** ESP**Collect Date:** 1/26/2010 4:10:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.098	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.6	04	%	3,951	Infrared Drying

**Sample:** AB14344**Customer #:** 1000356**Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 302**Affiliation:** ESP**Collect Date:** 1/26/2010 4:15:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	6.0	04	%	3,951	Infrared Drying

**Sample:** AB14345**Customer #:** 1000357**Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y3. Run lab Dup on this sample.**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 302**Affiliation:** ESP**Collect Date:** 1/26/2010 4:25:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.10	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.2	04	%	3,951	Infrared Drying

**Sample:** AB14346**Customer #:** 1000358**Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y3, duplicate #2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 302**Affiliation:** ESP**Collect Date:** 1/26/2010 4:47:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.057	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	1.1	04	%	3,951	Infrared Drying

**Sample:** AB14347**Customer #:** 1000359**Facility ID:**  
**County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** Y3, duplicate #2**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 302**Affiliation:** ESP**Collect Date:** 1/26/2010 4:50:00PM

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.093	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	2.2	04	%	3,951	Infrared Drying

**Sample: AB14348****Customer #:** 1000360**Facility ID:****County:** (Multiple)**Collector:** SEAN COUNIHAN**Sample Comment:** DUIS**Site:** Tannery Sludge Farm Fields**Sample Reference ID:** 302**Affiliation:** ESP**Collect Date:** 1/26/2010 12:00:00AM

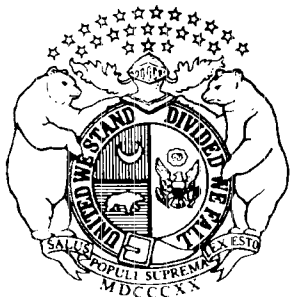
Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Hexavalent Chromium	Hexavalent Chromium	0.12	04	mg/Kg	3,941	Contract Lab Dep
Percent Moisture	Percent Moisture	2.8	04	%	3,951	Infrared Drying

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

**Chris Boldt, Laboratory Manager**  
**Environmental Services Program**  
**Field Services Division**

**Qualifier Descriptions**

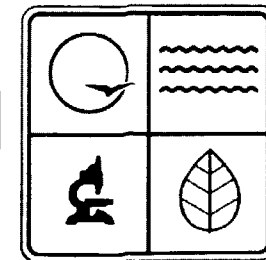
- |   |  |
|---|--|
| 01 Improper collection method                         | 02 Improper preservation                                 |
| 03 Exceeded holding time                              | 04 Analyzed by Contract Laboratory                       |
| 05 Estimated value, detected below PQL                | 06 Estimated value, QC data outside limits               |
| 07 Estimated value, analyte outside calibration range | 08 Analyte present in blank at > 1/2 reported value      |
| 09 Sample was diluted during analysis                 | 10 Laboratory error                                      |
| 11 Estimated value, matrix interference               | 12 Insufficient quantity                                 |
| 13 Estimated value, true result is >= reported value  | 14 Estimated value, non-homogeneous sample               |
| 15 No Result - Failed Quality Controls Requirements   | 16 Not analyzed - related analyte not detected           |
| 17 Results in dry weight                              | 18 Sample pH is outside the acceptable range             |
| 19 Estimated value                                    | 20 Not analyzed - Instrument failure                     |
| 21 No result - spectral interference                  | 22 pH was performed at the Laboratory                    |
| ND Not detected at reported value                     | 23 Contract Lab specific qualifier - see sample comments |



# Addendum

## Missouri Department of Natural Resources Environmental Services Program

# Addendum



Reason: Field results added per Michael Stroh

Order ID 100129004 Program, Contact: HWP Julieann Warren  
Report Date: 02/17/2010 LDPR/JobCode: FEPA8 / NJ10TSFF



Sample: AB14142



Customer #: 1000501

Facility ID:  
County: Buchanan

Site: Tannery Sludge Farm Fields  
Sample Reference ID: Parcel 3383

Collector: SEAN COUNIHAN

Affiliation: ESP

Collect Date: 1/26/2010 4:27:00PM

Sample Comment: Sample from well head Loc. 102. Applied Speciation bottle #B02367.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Field pH	Field pH	6.82		pH Units		EPA 150.1
Field Specific Conductivity	Field Specific Conductivity	483 uS/cm				SM 2510
Field Temperature	Field Temperature	12.7 C				EPA 170.1
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.269	04	ug/L	3,234	Contract Lab Dep

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

### Qualifier Descriptions

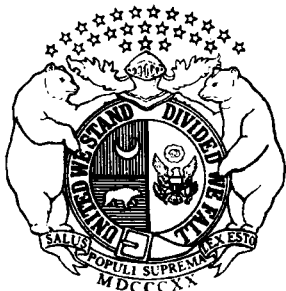
- |   |  |
|---|--|
| 01 Improper collection method                         | 02 Improper preservation                                 |
| 03 Exceeded holding time                              | 04 Analyzed by Contract Laboratory                       |
| 05 Estimated value, detected below PQL                | 06 Estimated value, QC data outside limits               |
| 07 Estimated value, analyte outside calibration range | 08 Analyte present in blank at > 1/2 reported value      |
| 09 Sample was diluted during analysis                 | 10 Laboratory error                                      |
| 11 Estimated value, matrix interference               | 12 Insufficient quantity                                 |
| 13 Estimated value, true result is >= reported value  | 14 Estimated value, non-homogeneous sample               |
| 15 No Result - Failed Quality Controls Requirements   | 16 Not analyzed - related analyte not detected           |
| 17 Results in dry weight                              | 18 Sample pH is outside the acceptable range             |
| 19 Estimated value                                    | 20 Not analyzed - Instrument failure                     |
| 21 No result - spectral interference                  | 22 pH was performed at the Laboratory                    |
| ND Not detected at reported value                     | 23 Contract Lab specific qualifier - see sample comments |

Chris Boldt

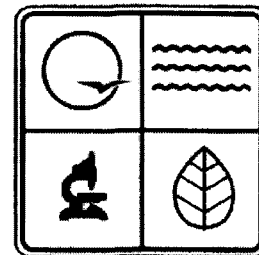
Chris Boldt, Laboratory Manager  
Environmental Services Program  
Field Services Division







Missouri Department of Natural Resources  
Environmental Services Program



Order ID 100129004

Program, Contact: HWP Julieann Warren

Report Date: 02/17/2010

LDPR/JobCode: FEPA8 / NJ10TSFF



Sample: AB14142



Customer #: 1000501

Facility ID:  
County: Buchanan

Site: Tannery Sludge Farm Fields  
Sample Reference ID: Parcel 3383

Collector: SEAN COUNIHAN

Affiliation: ESP

Collect Date: 1/26/2010 4:27:00PM

Sample Comment: Sample from well head Loc. 102. Applied Speciation bottle #B02367.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.269	04	ug/L	3,234	Contract Lab Dep

Sample: AB14143



Customer #: 1000502

Facility ID:  
County: Buchanan

Site: Tannery Sludge Farm Fields  
Sample Reference ID: Parcel 3383

Collector: SEAN COUNIHAN

Affiliation: ESP

Collect Date: 1/26/2010 4:35:00PM

Sample Comment: Field blank. Applied Speciation bottle #B02363.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	<0.022	ND, 04	ug/L	3,234	Contract Lab Dep

Sample: AB14144



Customer #: 1000503

Facility ID:  
County: Buchanan

Site: Tannery Sludge Farm Fields  
Sample Reference ID: Parcel 3383

Collector: SEAN COUNIHAN

Affiliation: ESP

Collect Date: 1/26/2010 12:00:00AM

Sample Comment: Duplicate. Applied Speciation bottle #B02391.

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
6020 Metals-Total Recoverable	Chromium	<0.25	ND	ug/L	3,310	SW 846 6020
Hexavalent Chromium by Contract Lab	Hexavalent Chromium by Contract Lab	0.263	04	ug/L	3,234	Contract Lab Dep

*Chris Boldt*

Chris Boldt, Laboratory Manager  
Environmental Services Program  
Field Services Division

**Qualifier Descriptions**

- |   |  |
|---|--|
| 01 Improper collection method                         | 02 Improper preservation                                 |
| 03 Exceeded holding time                              | 04 Analyzed by Contract Laboratory                       |
| 05 Estimated value, detected below PQL                | 06 Estimated value, QC data outside limits               |
| 07 Estimated value, analyte outside calibration range | 08 Analyte present in blank at > 1/2 reported value      |
| 09 Sample was diluted during analysis                 | 10 Laboratory error                                      |
| 11 Estimated value, matrix interference               | 12 Insufficient quantity                                 |
| 13 Estimated value, true result is >= reported value  | 14 Estimated value, non-homogeneous sample               |
| 15 No Result - Failed Quality Controls Requirements   | 16 Not analyzed - related analyte not detected           |
| 17 Results in dry weight                              | 18 Sample pH is outside the acceptable range             |
| 19 Estimated value                                    | 20 Not analyzed - Instrument failure                     |
| 21 No result - spectral interference                  | 22 pH was performed at the Laboratory                    |
| ND Not detected at reported value                     | 23 Contract Lab specific qualifier - see sample comments |

## **APPENDIX B**

### **Field Notes**

Tannery Sludge Farm Fields Site  
Andrew, Buchanan, Clinton and DeKalb Counties, MO

Tannery Sludge Farm Fields

Canadian  
Hilly Lakefield  
V/L Wilder

Cloudy 10°F Wind chill  
light Flurries

17:04

Parcel 4482 Loc id 221 - All tanned land

SU 164

Sloping + low lying areas High Variability

17:35

Parcel 4482 Loc id 221

SU 150

Picked for uniformity

17:30

Parcel 4482 Loc id 221

SU 109

Picked because filled at in Draining Swam/.  
took pictures 4 total.

1/26/10

Tannery Sludge Farm Fields

0944 21° Wind chill 90° @ 10-15 mph partly cloudy

Parcel 18970 Residential Yard

Loc 319

y1 @ 1001, y2 @ 1013

y3 @ 1010 y4 1025

Parcel 18970 Loc id 219

SU 15 because the corner was  
where sludge was piled before spreading.  
Resident said they were very good & evenly  
spreading sludge - corn field

Parcel 18971 Loc 320

Residential Yard

y1 @ 1150

y2 @ 1202

y3 @ 1122

y4 @ 1134

Parcel 18970 Loc id 219

SU 55 was chosen because it is a  
flat area that is at bottom of two slopes  
started @ 1220 Sighin Field

SU 48 chosen because relatively flat w/ little  
+ 2500 yd<sup>2</sup>

Started @ 1257

Parcel 3433 Loc id 202

SU 79 started @ 1415

Sludge was dumped <sup>near</sup> this plot.

1/26/10 Tannery Sludge Farm Field

Parcel H ~~3383~~ Loc id 200

Soil 59 @ 1518

Chosen for High Variability Sloped, terraced  
along r. fence

Parcel 3383

Parcel H ~~3383~~ Loc. 200

Soil 29 @ 1541

Chosen because low variability & uniformity

Parcel 3383 Loc ~~200~~<sup>smc</sup> 100

Ground Water Samples

PA meter @ 7pH reads 7.06

@ 4pH reads 4.1

Conductivity @ 1413us reads 1420us

ORP meter @ 200mv reads 220

Hydromat on @ 1620

First measurement @ 1623

Temp 11.3°C

pH = ~~7.5~~<sup>smc</sup> 6.80

Cond 504us

ORP = 192mv

Second measurement @ 1624

Temp 12.7°C

ORP 177mv

pH 6.82

Cond. 483

Sample taken @ 1627

Sample # 1000501

Applied speciation bottle # B02367

Field Blank taken 1635

Sample # 1000502

Applied speciation bottle # B02363

Duplicate taken sample # 1000503

Applied speciation bottle # B02391

1/27/10 Tannery Sludge Farm Fields

Mostly Cloudy 27°F Winds ENE @ 5-10

Parcel W030 Loc id 305 Residential yard

y1 @ 1026

y2 @ 1037

y3 @ 1046

Parcel W030 Loc id 205

Soil 71 picked because highly variable, whereas  
sludge was dumped.

Parcel W030 Loc id 205

Soil 34 chosen for low variability solid corn  
field, on slight slope

started @ 1100

Parcel 6632 Loc ID 205

Site 96 chosen because pasture land  
with farm variability.

Started @ 1210

Parcel unknown at this time

Daughters Residence of 6632 11444 State E.  
is Downwind from where Agency MD

Sludge was stock piled & also applied to bean  
field - (behind house).

On property of 6632 & were granted  
permission

Loc ID 306

y1 @ 1254

y2 @ 1302

y3 @ 1310

Parcel 3627 Loc ID 301

Residential yard only

Farm is a background not needed at this time

y1 @ 1455

y2 @ 1440

y3 @ 1449

y4 @ 1457



(140)

Jan 25 2010

Pam Hackler, Shelly Jackson  
Ben Frissell, Michael, Paul

Loc ID 209 = Du

Parcel ID 9949

Grid 138 = Su half corn,  $\frac{1}{2}$  fallow  
1330 Hrs Pasture

144 Su

Val, Hillary, Paul

no turns, uniform, slight slope  
<sup>red</sup> Rusty material

109 Su

Michael, Pam, Shelly  
low area in cornfield  
lots of organic matter

camera x15 # B3

Su 138 photo 1 = Bags

photo 2<sup>↑</sup>

photo 3 - cornfield soil

4 - pasture soil

(141)

Loc ID 222

Pam, Ken, Ben

Parcel 4482

1658 hours

Su 41

Low level, terraced

Su 10

Tree, turn around point, low level

Su 27

high ground, least variable

1-26-2010

Parcel 4859

Loc ID 225 Field

325 yard & 326

Su 32

Pam, Ben, Shelly

split between corn and bean  
fields



(142)

SU 60

turning point in corner of field

SU 8

Homogenous, all in corn

Parcel 1676

Loc ID 223

SU 44 - As renumbered

Northwest ~~east~~ corner

very variable, corn, hay, fallow,  
edge trees

SU 28

mostly homogenous, corn

SU 4

low land, corn, drainage

(143)

Parcel 6488

Loc ID Yard 313, Field 213

SU 9

1600 h, terraced, fairly homogenous,  
although close to reported  
storage area

SU 15

gently sloping, hay/pasture  
homogenous

SU 44

Varied, hay/pasture and  
row crop and turn in  
row crop field.

1-27-2010

Pam, Ben, Shelly

Parcel 5180

Loc ID 312 - Residence  
0800 h

(144)

Parcel 5180  
LOC 212

SU 53

Terraced, hay field (or fallow)  
0910 h  
sludge accumulates

SU 16

hilly, hay field, dirt road bisects  
0945

86 SU

hilltop, homogenous  
1015 h

Parcel 8940  
LOC 214

SU 53

heterogeneous, half of plot had  
sludge applied,  $\frac{1}{2}$  did not

(145)

SU 23

Sloping, homogenous  
not terraced

SU 27 25

Low drainage area,  
sludge applied

Parcel 2191

LOC ID 303 yard

LOC ID 203

SU 27

~~corner of field~~, turns

not row crop

edge of tree

next to corner of fence row  
↖ one over

Prime Tanning Farm Fields Date: 1/26/10  
FEPAB/NJDOTSFF

20° clear  
Breezy

Parcel: 21671

Loc: 218

SU: 87

SU chosen due to soy Bean field, low lying  
area next to Road

SU: 146

SU chosen due to pasture, uniform upland  
portion

SU: 102

SU chosen due to include buffered area  
in low and upland area, cow pasture

Parcel 1671: Loc ID: 217

SU 50: chosen as uniform upland, pasture  
grassy

SU ~~87~~<sup>103ms</sup>: Chosen as heterogeneous due to  
nearby buffered creeks, as low lying areas  
and uplands. Heavily used by cows



Parcel 1671

Loc ID 218<sup>ms</sup>

SU: ~~22~~<sup>22</sup> Chosen due to both uplands and low areas + because it is adjacent to a road on that yard.

Parcel: 2247

Loc ID: 216

SU# 16: upland soybean field uniform

SU# 32: adjacent to gate that looks most likely to be where sludge was brought in. Soybean field

SU# 50: near field boundary next to tree line incl. buffered area, non-buffered, upland and low areas pastureland

Stopped for DAY

1-27-10 Prime Tanning Farm Fields

25° cloudy, slight wind

Parcel 2241

Loc ID 224

SU 23: Uniform upland in middle of field. Corn/soy

SU 74: U-shaped turnaround near tree line and small pond. Incl. buffered area. Corn/soy

SU 19: Area adjacent to road incl. the main gate where sludge was likely to have been brought in  
Camera B5 exp # 7, 8

Parcel 2517

Loc ID 215

SU: 110 Area adj. to road incl. access gate. Visible signs of sludge near gate @ surface. Pasture  
Camera B5 exp # 9, 10

SU 82: uniform area in middle of field. Pasture, dense grass, visible layer of sludge ~1/2" down - reddish.

# Tannery Sludge Farm field (cont.)

1-27-10

Parcel 2517

Loc ID 215

SU: 55 Area near treeline and lake low elevation turnaround area. Visible sludge layer in a portion of SU, but not in buffered area. Camera BS exp. #11

Parcel 2517

Loc ID 204

SU: 99 Owner indicated this was an area where sludge was stockpiled. Near barn and gate, just SE of house.

SU: 42 Upland uniform area on slight N. slope. Dense grass pasture.

SU: 23 Area near treeline, gate and hay round storage. Probably incl. buffered + non-buffered portions.

Camera BS exp. #12-17

Parcel 2517

Loc. ID 304 Res. YARD

4 yard units. collected triplicate IS in Y1

Camera BS exp. #18  
MS

~~END OF DAY~~

1-27-10 (cont)

Parcel 2517<sup>ms</sup>

Loc ID 304-203

SU 18: uniform east sloping pasture no visible sludge, SU abuts edge of small pond.

END



March 8, 2010

Michael Stroh  
Missouri Department of Natural Resources / Hazardous Waste Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 522-9902

Dear Mr. Stroh,

Attached is the report associated with sixty-five (65) soil samples submitted for hexavalent chromium quantitation and conventionals (TOC, percent moisture, pH, and ORP) analyses on February 11, 2010. The samples were received on February 12, 2010 in sealed containers at ambient temperature. The submitted samples were extracted using EPA Method 3060A and then analyzed for hexavalent chromium via ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). All conventionals analyses were performed using established methods as described in this report. Any analytical issues associated with the analysis are addressed in the following report.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

A handwritten signature in black ink that reads "Ben Wozniak". The signature is fluid and cursive, with the first name "Ben" and last name "Wozniak" clearly distinguishable.

Ben Wozniak  
Project Manager  
Applied Speciation and Consulting, LLC

Applied Speciation and Consulting, LLC

Report Prepared for:

Michael Stroh  
Missouri Department of Natural Resources / Hazardous Waste Program  
P.O. Box 176  
Jefferson City, MO 65102

March 8, 2010

## **1. Sample Reception**

Sixty-five (65) soil samples were submitted in wide-mouth glass jars (not provided by Applied Speciation and Consulting) for hexavalent chromium quantitation and conventionals (TOC, percent moisture, pH, and ORP) analyses on February 11, 2010. The samples were received in acceptable condition on February 12, 2010 in sealed containers at ambient temperature.

In accordance with approved EPA methodology, Applied Speciation and Consulting (ASC) recommends that all soils submitted for hexavalent chromium analysis remain at a temperature of  $\leq 6^{\circ}\text{C}$  prior to preparation and analysis.

All samples were received in a laminar flow clean hood void of trace metals contamination and ultra-violet radiation. Upon reception, all samples were designated discrete sample identifiers and then stored in a secure, monitored refrigerator (maintained at a temperature of  $\leq 4^{\circ}\text{C}$ ) until all preparatory and analytical procedures could be performed. Splits of each sample requesting TOC analysis were distributed to Amtest Inc.

It must be noted that the glass jar containing the sample identified as AB14474 shattered during transit to ASC. Consequently, no sample results could be provided for this particular sample. The client was contacted regarding this issue and instructed ASC to analyze the sample identified as AB14464 in place of the compromised sample.

## **2. Sample Preparation**

All sample preparation is performed in laminar flow clean hoods known to be free from trace metals contamination. All applied water for dilutions and sample preservatives are monitored for contamination to account for any biases associated with the sample results.

Hexavalent Chromium Quantification by IC-ICP-DRC-MS Prior to analysis, all samples were extracted using EPA Method 3060A on either February 17<sup>th</sup> (Batches

C1 and C2) or February 18<sup>th</sup> (Batches C3 and C4). In summary, each sample was first spread into a thin layer onto a clean surface and a known mass of each sample was then weighed into a polypropylene centrifuge tube by taking approximately fifteen random subsamples of the original sample. A buffered alkaline extraction solution, MgCl<sub>2</sub>, and a phosphate buffer solution were then applied to each sample. All vials were then heated at 90-95°C in a sonicating bath for a minimum of one (1) hour. The resulting extracts were cooled, filtered, and injected directly into sealed autosampler vials prior to analysis for hexavalent chromium.

pH and ORP Analyses Prior to the analyses, all samples submitted for pH and ORP measurements were prepared in accordance with EPA Method 9045D on February 23, 2010. In summary, a known mass of each sample was placed into a polypropylene centrifuge tube and an equivalent mass of reagent water was also added. The resulting suspensions were shaken for five (5) minutes, after which each was briefly centrifuged and filtered (0.45µm) into a new centrifuge vial. Each sample extract was then analyzed for pH and ORP as described herein.

### 3. Sample Analysis

All sample analysis is preceded by a minimum of a five-point calibration curve spanning the entire concentration range of interest. Calibration curves are performed at the beginning of each analytical day. All calibration curves, associated with each species of interest, are standardized by linear regression resulting in a response factor. All sample results are **instrument blank corrected** to account for any operational biases associated with the analytical platform. All hexavalent chromium sample results have also been **dry-weight corrected** using the measured total solids (percent moisture) values.

Prior to sample analysis, all calibration curves are verified using second source standards which are identified as initial calibration verification standards (ICV).

Ongoing instrument performance is identified by the analysis of continuing calibration verification standards (CCV) and continuing calibration blanks (CCB) at a minimal interval of every ten analytical runs.

Hexavalent Chromium Quantitation by IC-ICP-DRC-MS All sample extracts for hexavalent chromium quantitation were analyzed via a modified version of EPA Method 7199 employing ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Aliquots of each sample are injected onto an anion exchange column and mobilized by an alkaline (pH > 7) gradient. The eluting chromium species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (DRC) containing a specific reactive gas which preferentially reacts with interfering ions of the same target mass to charge (m/z) ratios. A solid-state detector detects ions transmitted



through the mass analyzer, on the basis of their mass-to-charge ratio ( $m/z$ ), and the resulting current is processed by a data handling system.

The retention time for hexavalent chromium is compared to known standards for species identification.

*Total Solids (Percent Moisture) Analysis* Approximately 1-2 grams of each sample was placed into a pre-weighed pan, and the combined mass of the sample and pan was recorded. All samples were then placed into a convection oven maintained at a temperature of 65-70°C. After drying for a minimum of eight (8) hours, all samples were briefly cooled and reweighed. The total solids percentage of each sample was calculated by dividing the weight of the dried sample by the weight of the original sample. All samples were prepared for total solids on either February 25, 2010 (Batches S1-S4) or on March 1, 2010 (Batch S5)

*pH Analysis* All sample extracts for pH measurement were analyzed in accordance with EPA Method 9045D on February 23, 2010.

*ORP Analysis* All sample extracts for ORP measurement were analyzed in accordance with ASTM D 1498-93 on February 23, 2010. All measured ORP values were corrected for the reference electrode in accordance with the guidance provided in EPA Method 3060A.

*TOC Analysis* All samples submitted for TOC measurements were analyzed via EPA Method 9060 on either February 23, 2010 (Batch T1) or on March 2, 2010 (Batch T2).

#### **4. Analytical Issues**

Although the overall analyses went well, significant issues were encountered during the applied hexavalent chromium extraction procedure, as described below:

The RPD associated with the matrix duplicate (MD) performed on the sample identified as AB14426 was above the established control limit of 25% for Batch C2 (25.8%). The concentrations of hexavalent chromium in the parent sample and MD are both significantly greater than ten times the reporting limit (RL). Consequently, all samples associated with this batch were re-extracted and the RPD associated with the MD performed on AB14426 was still elevated (20.3%). Since the re-extraction and re-analysis did not take place until after the method-specified holding time of thirty (30) days had expired, the original results associated with Batch C2 have been reported despite the elevated MD RPD. The fact that the MD RPD for AB14426 was still elevated upon re-extraction suggests this sample matrix may be heterogeneous.

*Hexavalent Chromium Quantitation - Laboratory Control Samples* Three laboratory control samples were extracted with each batch of samples to identify the extraction efficiency and capacity of the extraction procedure to induce conversion of trivalent

chromium to hexavalent chromium. The laboratory control samples spiked with an aqueous hexavalent chromium and a solid  $\text{PbCrO}_4$  standard produced acceptable recoveries for each batch (ranging from 95.3% to 111.1%), indicating that the applied method effectively extracts and stabilizes the hexavalent chromium species. The third laboratory control sample spiked with an aqueous trivalent chromium standard solution resulted in a hexavalent chromium recovery of less than 1.0% for each of the sample batches. The quantity of hexavalent chromium detected in these laboratory control samples is near that present in the associated preparation blanks, which is attributed to trace levels of hexavalent chromium in the reagents used for the extraction procedure. The low recoveries for the trivalent chromium spikes demonstrate that the extraction procedure, under ideal conditions, induces minimal conversion of trivalent to hexavalent chromium.

Hexavalent Chromium Quantitation – Matrix Spike / Matrix Spike Duplicates (MS/MSDs) Similar to the laboratory control samples, three discrete sets of matrix spikes were extracted with each batch to identify the interaction of the sample matrix with trivalent and hexavalent chromium. The performance of the matrix spikes can assist in identifying chemical interferences associated with the sample matrix and the applied extraction procedure.

Hexavalent Chromium Quantitation – Cr(III) MS/MSDs The hexavalent chromium recoveries associated with each aqueous trivalent chromium MS and MSD were less than 3%. These low trivalent chromium matrix spike recoveries confirm that the extraction procedure induces minimal oxidation of trivalent chromium to hexavalent chromium in the spiked sample matrices.

The RPD associated with the MSD performed for each of the four sample batches was above the established control limit of 25% (484.7%, 153.8%, 98.7%, and 45.3% respectively). These elevated RPDs are attributable to the fact that a minimal amount of the trivalent chromium spikes was converted to hexavalent chromium during the applied extraction procedure, as expected, resulting in hexavalent chromium concentrations that represented an increase in Cr(VI) less than the ambient sample concentration. Since greater variability is expected as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

Hexavalent Chromium Quantitation – Aqueous Cr(VI) and Solid  $\text{PbCrO}_4$  MS/MSDs For Batches C1-C3, the hexavalent chromium recoveries associated with the aqueous Cr(VI) matrix spikes were all less than 2.0%. The recoveries associated with the insoluble Cr(VI) matrix spikes for each of these batches were also biased low (ranging from 63.0-76.7%). As previously mentioned, the recoveries of both the aqueous and insoluble hexavalent chromium LCS were acceptable for each of these batches, demonstrating that the applied procedure both extracts and stabilizes Cr(VI) in solution. Since the low bias observed for these soluble and insoluble Cr(VI) matrix spikes may therefore be attributed to interference from the spiked sample matrices, no

further corrective action was deemed necessary. These MS/MSD results suggest that the spiked sample matrix associated with each of these sample batches strongly favor reduction of hexavalent chromium. For Batch C1 this is further supported by the measured pH and ORP values obtained for the sample identified as AB14407, which indicate a reductive sample matrix, as well as the high TOC value (4.5%) for this sample.

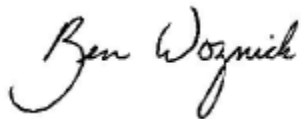
The RPDs associated with the aqueous Cr(VI) MS/MSD sets performed for Batches C1-C3 were above the established control limit of 25% (342.7%, 872.8%, and 206.4%, respectively). As previously mentioned, the spiked sample matrix for each of these batches exhibited strongly reducing conditions (spike recoveries less than 2.0%), resulting in Cr(VI) concentrations for the MS and MSD that were less than twice the ambient sample concentrations. Since greater variability is expected as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14475 for Batch C4 were within acceptance limits for both the aqueous and insoluble hexavalent chromium matrix spikes. These acceptable recoveries suggest that the applied method effectively extracts and stabilizes hexavalent chromium in this particular sample matrix.

The estimated method detection limit (eMDL) for hexavalent chromium for each batch of solids is generated using the standard deviation of the associated preparation blanks, in accordance with Applied Speciation and Consulting's SOP.

If you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Ben Wozniak". The signature is written in a cursive, flowing style.

Ben Wozniak  
Project Manager  
Applied Speciation and Consulting, LLC

Hexavalent Cr & Conventional Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Sample Results**

Sample ID	Batch Identifiers	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	pH
AB14404	C1, S1, T1	2/17/2010 22:09	0.607	96.1	4.4	449	6.28
AB14405	C1, S1, T1	2/17/2010 22:15	0.418	96.4	4.1	433	6.85
AB14406	C1, S1, T1	2/17/2010 22:22	0.666	96.5	4.9	465	7.86
AB14407	C1, S1, T1	2/17/2010 22:40	1.05	93.8	4.5	477	5.90
AB14408	C1, S1, T1	2/17/2010 23:30	0.657	99.2	0.81	351	7.87
AB14409	C1, S1, T2	2/17/2010 23:37	0.225	98.5	0.47	352	7.87
AB14410	C1, S1, T1	2/17/2010 23:55	0.605	96.3	4.5	469	6.61
AB14411	C1, S1, T1	2/18/2010 0:08	0.833	96.2	5.5	407	6.62
AB14412	C1, S1, T1	2/18/2010 0:20	1.61	96.3	5.4	487	6.78
AB14413	C1, S1, T2	2/18/2010 11:08	0.069	98.7	4.4	420	6.45
AB14414	C1, S1, T2	2/18/2010 0:45	0.692	96.9	5.1	422	6.81
AB14415	C1, S1, T2	2/18/2010 0:52	0.793	97.5	6.4	468	5.91
AB14416	C1, S1, T2	2/18/2010 1:17	1.83	91.8	6.3	444	7.59
AB14417	C1, S1, T2	2/18/2010 1:23	1.11	97.1	1.3	475	6.34
AB14418	C1, S1, T2	2/18/2010 1:29	3.40	97.9	2.1	434	7.25
AB14419	C1, S1, T2	2/18/2010 1:35	3.29	98.3	2.2	422	7.38
AB14420	C1, S1, T1	2/18/2010 1:42	0.269	94.5	NR	NR	NR
AB14421	C1, S1, T1	2/18/2010 1:48	1.13	98.2	NR	NR	NR
AB14423	C1, S1, T1	2/18/2010 10:55	0.386	95.7	NR	NR	NR
AB14424	C1, S1, T1	2/18/2010 11:01	0.278	98.2	NR	NR	NR

dw = dry weight

\* Times reported in CST

\*\* ORP measurements corrected for reference electrode as specified in EPA Method 3060A

NR = Not requested

U = Sample concentration is less than the estimated Method Detection Limit (eMDL)

J = Sample concentration is between the eMDL and the Reporting Limit (RL)

Hexavalent Cr & Conventional Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Sample Results**

Sample ID	Batch Identifiers	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	pH
AB14426	C2, S2	2/18/2010 12:10	0.406	97.7	NR	NR	NR
AB14427	C2, S2	2/18/2010 13:13	0.462	97.0	NR	NR	NR
AB14429	C2, S2	2/18/2010 13:19	1.27	98.8	NR	NR	NR
AB14430	C2, S2	2/18/2010 13:25	0.624	98.8	NR	NR	NR
AB14431	C2, S2	2/18/2010 13:31	0.626	97.5	NR	NR	NR
AB14432	C2, S2	2/18/2010 13:38	0.694	99.2	NR	NR	NR
AB14433	C2, S5	2/18/2010 13:56	1.56	98.8	NR	NR	NR
AB14435	C2, S2	2/18/2010 14:03	0.242	98.6	NR	NR	NR
AB14436	C2, S2	2/18/2010 14:09	0.803	98.6	NR	NR	NR
AB14438	C2, S2	2/18/2010 14:15	0.468	97.2	NR	NR	NR
AB14439	C2, S2	2/18/2010 14:21	1.10	98.0	NR	NR	NR
AB14440	C2, S2	2/18/2010 14:28	0.490	97.0	NR	NR	NR
AB14441	C2, S2	2/18/2010 14:34	1.54	98.4	NR	NR	NR
AB14442	C2, S2	2/18/2010 15:11	0.760	96.8	NR	NR	NR
AB14443	C2, S2	2/18/2010 15:18	0.703	96.8	NR	NR	NR
AB14444	C2, S2	2/18/2010 15:24	0.387	97.2	NR	NR	NR
AB14445	C2, S2	2/18/2010 15:30	0.240	98.6	NR	NR	NR
AB14446	C2, S2	2/18/2010 15:36	0.359	97.3	NR	NR	NR
AB14447	C2, S2	2/18/2010 15:43	0.728	97.5	NR	NR	NR
AB14448	C2, S2	2/18/2010 15:49	1.05	97.2	NR	NR	NR

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Hexavalent Cr & Conventional Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
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Applied Speciation and Consulting, LLC

**Sample Results**

Sample ID	Batch Identifiers	Date & Time Analyzed for Cr(VI)*	Cr(VI) in mg/kg (dw)	% Solids	TOC in %	ORP (mV)**	pH
AB14449	C3, S3	2/22/2010 15:45	1.73	97.4	NR	NR	NR
AB14450	C3, S3	2/22/2010 16:47	1.14	98.3	NR	NR	NR
AB14451	C3, S3	2/22/2010 16:53	1.58	96.8	NR	NR	NR
AB14453	C3, S3	2/22/2010 17:31	1.55	96.9	NR	NR	NR
AB14454	C3, S3	2/22/2010 17:37	0.821	98.5	NR	NR	NR
AB14455	C3, S3	2/22/2010 17:43	1.16	97.8	NR	NR	NR
AB14456	C3, S3	2/22/2010 17:50	1.19	98.5	NR	NR	NR
AB14457	C3, S3	2/22/2010 17:56	0.812	98.6	NR	NR	NR
AB14459	C3, S3	2/22/2010 18:02	1.04	99.0	NR	NR	NR
AB14460	C3, S3	2/22/2010 18:08	1.29	99.3	NR	NR	NR
AB14462	C3, S3	2/22/2010 18:15	2.45	97.9	NR	NR	NR
AB14463	C3, S3	2/22/2010 18:21	0.487	97.9	NR	NR	NR
AB14464	C3, S3	2/22/2010 19:23	1.64	98.2	NR	NR	NR
AB14465	C3, S3	2/22/2010 18:27	2.52	99.5	NR	NR	NR
AB14466	C3, S3	2/22/2010 18:46	2.52	99.6	NR	NR	NR
AB14468	C3, S3	2/22/2010 18:52	0.166	99.5	NR	NR	NR
AB14469	C3, S3	2/22/2010 18:58	0.296	99.1	NR	NR	NR
AB14470	C3, S3	2/22/2010 19:05	0.872	98.2	NR	NR	NR
AB14472	C3, S3	2/22/2010 19:11	0.234	98.9	NR	NR	NR
AB14473	C3, S3	2/22/2010 19:17	0.279	97.8	NR	NR	NR

dw = dry weight

\* Times reported in CST

\*\* ORP measurements corrected for reference electrode as specified in EPA Method 3060A

NR = Not requested

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Hexavalent Cr & Conventional Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Sample Results**

<b>Sample ID</b>	<b>Batch Identifiers</b>	<b>Date &amp; Time Analyzed for Cr(VI)*</b>	<b>Cr(VI) in mg/kg (dw)</b>	<b>% Solids</b>	<b>TOC in %</b>	<b>ORP (mV)**</b>	<b>pH</b>
AB14475	C4, S4	2/22/2010 20:26	0.518	99.6	NR	NR	NR
AB14476	C4, S4	2/22/2010 21:28	2.27	99.4	NR	NR	NR
AB14477	C4, S4	2/22/2010 21:35	1.48	99.3	NR	NR	NR
AB14478	C4, S4, T2	2/22/2010 21:41	0.474	98.9	2.9	415	7.42
AB14479	C4, S4, T2	2/22/2010 21:47	1.36	99.6	1.3	397	7.66

dw = dry weight

\* Times reported in CST

\*\* ORP measurements corrected for reference electrode as specified in EPA Method 3060A

NR = Not requested

U = Sample concentration is less than the estimated Method Detection Limit (eMDL)

J = Sample concentration is between the eMDL and the Reporting Limit (RL)

Hexavalent Cr & Conventional Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Quality Control Summary - Preparation Blank Summary**

Analyte	Units	Batch	PBS1	PBS2	PBS3	PBS4	Mean	StdDev	eMDL	RL
TOC	%	T1	< 0.05	-	-	-	-	-	-	0.05
TOC	%	T2	< 0.05	-	-	-	-	-	-	0.05
Cr(VI)	mg/kg (dw)	C1	0.020	0.021	0.022	0.025	0.022	0.002	0.006	0.025
Cr(VI)	mg/kg (dw)	C2	0.021	0.017	0.016	0.014	0.017	0.003	0.008	0.025
Cr(VI)	mg/kg (dw)	C3	0.021	0.021	0.022	0.023	0.022	0.001	0.002	0.025
Cr(VI)	mg/kg (dw)	C4	0.031	0.024	0.021	0.019	0.024	0.005	0.015	0.025

eMDL = Estimated Method Detection Limit

RL = Reporting Limit



Hexavalent Cr & Conventional Results for the Missouri Department of Natural Resources  
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**Quality Control Summary - Laboratory Control Samples**

<b>Analyte</b>	<b>Units</b>	<b>Batch</b>	<b>LCS</b>	<b>True Value</b>	<b>Result</b>	<b>Recovery</b>
TOC	%	T1	LCS	1.3	1.3	100
TOC	%	T2	LCS	1.3	1.4	108
Cr(III)	mg/kg (dw)	C1	LCS	5.000	0.019	0.4
Cr(VI)	mg/kg (dw)	C1	LCS	5.000	5.557	111.1
PbCrO <sub>4</sub>	mg/kg (dw)	C1	LCS	6692	7332	109.6
Cr(III)	mg/kg (dw)	C2	LCS	5.000	0.021	0.4
Cr(VI)	mg/kg (dw)	C2	LCS	5.000	4.986	99.7
PbCrO <sub>4</sub>	mg/kg (dw)	C2	LCS	6628	6317	95.3
Cr(III)	mg/kg (dw)	C3	LCS	5.000	0.027	0.5
Cr(VI)	mg/kg (dw)	C3	LCS	5.000	5.474	109.5
PbCrO <sub>4</sub>	mg/kg (dw)	C3	LCS	6789	7005	103.2
Cr(III)	mg/kg (dw)	C4	LCS	5.000	0.033	0.7
Cr(VI)	mg/kg (dw)	C4	LCS	5.000	5.445	108.9
PbCrO <sub>4</sub>	mg/kg (dw)	C4	LCS	6049	6343	104.9

Hexavalent Cr & Conventional Results for the Missouri Department of Natural Resources  
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**Quality Control Summary - Matrix Duplicate**

Analyte	Units	Batch	Sample ID	Rep 1	Rep 2	Mean	RPD
TOC	%	T1	AB14410	4.5	4.3	4.4	4.5
TOC	%	T2	AB14419	2.2	2.2	2.2	0.0
% Solids	%	S1	AB14404	96.05	96.10	96.08	0.1
% Solids	%	S2	AB14426	97.67	97.75	97.71	0.1
% Solids	%	S3	AB14449	97.45	97.55	97.50	0.1
% Solids	%	S4	AB14475	99.55	99.51	99.53	0.0
% Solids	%	S5	AB14433	98.82	98.82	98.82	0.0
Cr(VI)	mg/kg (dw)	C1	AB14407	1.051	0.942	0.997	11.0
Cr(VI)	mg/kg (dw)	C1	AB14410	0.605	0.750	0.677	21.4
Cr(VI)	mg/kg (dw)	C1	AB14411	0.833	0.788	0.811	5.6
Cr(VI)	mg/kg (dw)	C1	AB14412	1.613	1.620	1.617	0.4
Cr(VI)	mg/kg (dw)	C1	AB14413	0.069	0.080	0.075	15.0
Cr(VI)	mg/kg (dw)	C1	AB14415	0.793	0.775	0.784	2.3
Cr(VI)	mg/kg (dw)	C2	AB14426	0.406	0.526	0.466	25.8*
Cr(VI)	mg/kg (dw)	C3	AB14449	1.729	1.408	1.568	20.5
Cr(VI)	mg/kg (dw)	C4	AB14475	0.518	0.434	0.476	17.6

NC = Value was not calculated due to one or more concentrations below the eMDL

\* The RPD is above the established control limit of 25%; please see narrative.

Hexavalent Cr & Conventionals Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Quality Control Summary - Matrix Spike/ Matrix Spike Duplicate**

Analyte	Units	Batch	Sample ID	Spike Conc	MS Result	Recovery	Spike Conc	MSD Result	Recovery	RPD
Cr(III)	mg/kg (dw)	C1	AB14407	5.247	1.078	1.5	5.253	0.963	-0.6	484.7**
Cr(VI)	mg/kg (dw)	C1	AB14407	5.310	0.758	-4.5*	5.319	1.060	1.2*	342.7**
PbCrO <sub>4</sub>	mg/kg (dw)	C1	AB14407	7770	5962	76.7	7752	5644	72.8*	5.3
Cr(III)	mg/kg (dw)	C2	AB14426	5.052	0.464	0.0	5.150	0.451	-0.3	153.8**
Cr(VI)	mg/kg (dw)	C2	AB14426	5.064	0.427	-0.8*	5.068	0.528	1.2*	872.8**
PbCrO <sub>4</sub>	mg/kg (dw)	C2	AB14426	6915	4630	66.9*	6961	4666	67.0*	0.1
Cr(III)	mg/kg (dw)	C3	AB14449	4.909	1.709	2.9	4.971	1.617	1.0	98.7**
Cr(VI)	mg/kg (dw)	C3	AB14449	5.151	1.153	-8.1*	5.133	1.575	0.1*	206.4**
PbCrO <sub>4</sub>	mg/kg (dw)	C3	AB14449	5866	3694	63.0*	6003	3832	63.8*	1.3
Cr(III)	mg/kg (dw)	C4	AB14475	4.934	0.503	0.6	4.996	0.520	0.9	45.3**
Cr(VI)	mg/kg (dw)	C4	AB14475	4.838	5.336	100.5	4.953	5.520	101.8	1.4
PbCrO <sub>4</sub>	mg/kg (dw)	C4	AB14475	6088	6104	100.3	6391	6436	100.7	0.4

\* The recovery is below the established control limit of 75%; please see narrative.

\*\* The RPD is above the established control limit of 25%; please see narrative.

NC = Value was not calculated due to one or more concentrations below the eMDL

Hexavalent Cr Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Quality Control Summary - Historical Calibration Standards**

Cr(VI) True Value	Cr(VI) Measured Result	Percent Recovery
0.050	0.079	158.8
0.050	0.072	143.1
0.050	0.082	163.6
0.050	0.073	146.2
0.500	0.550	110.0
5.000	5.174	103.5
50.00	49.98	100.0
0.050	0.057	114.7
0.050	0.056	112.0
0.050	0.060	120.6
0.050	0.064	127.8
0.500	0.499	99.7
5.000	5.055	101.1
25.00	24.98	99.9
0.050	0.047	93.7
0.050	0.050	100.9
0.050	0.041	81.4
0.050	0.043	85.8
0.500	0.484	96.7
5.000	4.891	97.8
25.00	23.51	94.0

All results are reported in µg/L

Hexavalent Cr Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
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Applied Speciation and Consulting, LLC

**Quality Control Summary - Historical CCV Standards**

<b>Cr(VI) True Value</b>	<b>Cr(VI) Measured Result</b>	<b>Percent Recovery</b>
5.000	5.585	111.7
5.000	5.470	109.4
5.000	5.353	107.1
5.000	5.516	110.3
5.000	5.358	107.2
5.000	5.072	101.4
5.000	4.978	99.6
5.000	4.932	98.6
5.000	4.861	97.2
5.000	4.888	97.8
5.000	4.882	97.6
5.000	4.815	96.3
5.000	5.348	107.0
5.000	5.274	105.5
5.000	5.229	104.6
5.000	5.338	106.8
5.000	5.418	108.4
5.000	5.485	109.7
5.000	5.444	108.9
5.000	5.437	108.7

CCV = Continuing Calibration Verification

All results are reported in µg/L

Hexavalent Cr Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Quality Control Summary - Historical Second Source Standards**

<b>Cr(VI) True Value</b>	<b>Cr(VI) Measured Result</b>	<b>Percent Recovery</b>
4.000	3.795	94.9
200.0	218.7	109.4
202.0	214.0	105.9
10.00	12.09	120.9
5.000	5.495	109.9
5.000	5.107	102.1
100.0	95.38	95.4
5.000	4.932	98.6
5.000	4.706	94.1
20.00	20.30	101.5
5.000	5.029	100.6
100.0	107.2	107.2
5.000	5.369	107.4
5.000	5.557	111.1
5.000	4.986	99.7
5.000	5.474	109.5
5.000	5.445	108.9
5.000	4.546	90.9

Second source standard = Cr(VI) Blank Spike (from 3060A Extraction)

All results are reported in mg/kg

Hexavalent Cr Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 8, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Quality Control Summary - Historical Matrix Spikes**

Ambient Cr(VI) Conc.	MS Spike Conc.	MS	MS Recovery	MSD Spike Conc.	MSD	MSD Recovery	RPD
		Measured Result			Measured Result		
3.647	4.009	6.202	63.7	4.061	6.469	69.5	8.7
2.961	221.2	257.4	115.0	209.2	216.7	102.1	11.9
2.853	150.2	167.7	109.8	226.2	243.7	106.4	3.1
0.118	43.67	44.23	101.0	54.70	53.27	97.2	3.9
0.077	4.976	3.343	65.6	5.124	3.790	72.5	9.9
126.8	867.7	947.6	94.6	765.2	834.1	92.4	2.3
0.187	4.046	3.095	71.9	3.775	2.961	73.5	2.2
0.160	4.017	4.214	100.9	4.078	4.038	95.1	5.9
0.080	3.906	3.657	91.6	3.959	3.600	88.9	2.9
0.101	5.052	3.646	70.2	4.694	3.300	68.2	2.9
0.224	4.910	2.551	47.4	4.893	2.361	43.7	8.2
0.342	4.885	3.534	65.4	4.820	3.424	63.9	2.2
< 0.014 U	5.243	< 0.014 U	0.0	5.147	0.039	0.8	200.0
1.816	20.46	6.685	23.8	20.39	5.832	19.7	18.8
0.088	5.064	3.253	62.5	5.134	3.254	61.7	1.3
0.997	5.310	0.758	-4.5	5.319	1.060	1.2	342.7
0.466	5.064	0.427	-0.8	5.068	0.528	1.2	872.8
0.184	5.007	4.098	78.1	4.779	4.272	85.5	9.0
1.568	5.151	1.153	-8.1	5.133	1.575	0.1	206.4
0.476	4.838	5.336	100.5	4.953	5.520	101.8	1.4

All results are reported in mg/kg



March 4, 2010

Michael Stroh  
Missouri Department of Natural Resources / Hazardous Waste Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 522-9902

Dear Mr. Stroh,

Attached is the report associated with sixty (60) soil samples submitted for hexavalent chromium quantitation on February 3, 2010. The samples were received on February 4, 2010 in sealed coolers at 1.7°C and 2.9°C, respectively. The submitted samples were extracted using EPA Method 3060A and then analyzed for hexavalent chromium via ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Any analytical issues associated with the analysis are addressed in the following report.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

A handwritten signature in black ink that reads "Ben Wozniak".

Ben Wozniak  
Project Manager  
Applied Speciation and Consulting, LLC



Applied Speciation and Consulting, LLC

Report Prepared for:

Michael Stroh  
Missouri Department of Natural Resources / Hazardous Waste Program  
P.O. Box 176  
Jefferson City, MO 65102

March 4, 2010

## **1. Sample Reception**

Sixty (60) soil samples were submitted in wide-mouth glass jars (not provided by Applied Speciation and Consulting) for hexavalent chromium quantitation on February 3, 2010. The samples were received in acceptable condition on February 4, 2010 in sealed coolers at 1.7°C and 2.9°C, respectively.

All samples were received in a laminar flow clean hood void of trace metals contamination and ultra-violet radiation. Upon reception, all samples were designated discrete sample identifiers and then stored in a secure, monitored refrigerator (maintained at a temperature of  $\leq 4^{\circ}\text{C}$ ) until all preparatory and analytical procedures could be performed.

## **2. Sample Preparation**

All sample preparation is performed in laminar flow clean hoods known to be free from trace metals contamination. All applied water for dilutions and sample preservatives are monitored for contamination to account for any biases associated with the sample results.

Hexavalent Chromium Quantification by IC-ICP-DRC-MS Prior to analysis, all samples were extracted using EPA Method 3060A on February 8<sup>th</sup> (Batch 1), February 16<sup>th</sup> (Batch 2), and February 9<sup>th</sup> (Batch 3). In summary, each sample was first spread into a thin layer onto a clean surface and a known mass of each sample was then weighed into a polypropylene centrifuge tube by taking approximately fifteen random subsamples of the original sample. A buffered alkaline extraction solution,  $\text{MgCl}_2$ , and a phosphate buffer solution were then applied to each sample. All vials were then heated at 90-95°C in a sonicating bath for a minimum of one (1) hour. The resulting extracts were cooled, filtered, and injected directly into sealed autosampler vials prior to analysis for hexavalent chromium.

### 3. Sample Analysis

All sample analysis is preceded by a minimum of a five-point calibration curve spanning the entire concentration range of interest. Calibration curves are performed at the beginning of each analytical day. All calibration curves, associated with each species of interest, are standardized by linear regression resulting in a response factor. All sample results are **instrument blank corrected** to account for any operational biases associated with the analytical platform. All sample results have also been **dry-weight corrected** using the measured total solids (percent moisture) values.

Prior to sample analysis, all calibration curves are verified using second source standards which are identified as initial calibration verification standards (ICV).

Ongoing instrument performance is identified by the analysis of continuing calibration verification standards (CCV) and continuing calibration blanks (CCB) at a minimal interval of every ten analytical runs.

Hexavalent Chromium Quantitation by IC-ICP-DRC-MS All sample extracts for hexavalent chromium quantitation were analyzed via a modified version of EPA Method 7199 employing ion chromatography inductively coupled plasma dynamic reaction cell mass spectrometry (IC-ICP-DRC-MS). Aliquots of each sample are injected onto an anion exchange column and mobilized by an alkaline (pH > 7) gradient. The eluting chromium species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (DRC) containing a specific reactive gas which preferentially reacts with interfering ions of the same target mass to charge (m/z) ratios. A solid-state detector detects ions transmitted through the mass analyzer, on the basis of their mass-to-charge ratio (m/z), and the resulting current is processed by a data handling system.

The retention time for hexavalent chromium is compared to known standards for species identification.

Total Solids Analysis Approximately 1-2 grams of each sample was placed into a pre-weighed pan, and the combined mass of the sample and pan was recorded. All samples were then placed into a convection oven maintained at a temperature of 65-70°C. After drying for a minimum of eight (8) hours, all samples were briefly cooled and reweighed. The total solids percentage of each sample was calculated by dividing the weight of the dried sample by the weight of the original sample.

### 4. Analytical Issues

Although the overall analyses went well, significant issues were encountered during the applied extraction procedure, as described below:

The RPD associated with the matrix duplicate (MD) performed on the sample identified as AB14310 was above the established control limit of 25% for batch 2 (28.7%). The concentrations of hexavalent chromium in the parent sample and MD are both less than ten times the reporting limit (RL), with the absolute difference between the two values being approximately twice the RL. Since greater variability is expected as sample concentrations approach the RL, the elevated RPD is identified as an inherent limitation of any quantitative method and does not impact the validity of the reported results.

It must be noted that although the client requested an additional matrix duplicate (MD) be performed on the sample identified as AB14321, this duplicate set was mistakenly not included in the digestion batch associated with this sample, *i.e.* batch 2. Batch 2 did include three other MD sets, however, so the variability associated with the extractions and analyses are demonstrated via these MDs. By the time Applied Speciation and Consulting (ASC) was able to re-extract AB14321 with the additional MD set that was requested, the sample had exceeded the recommended holding time of thirty (30) days specified in EPA Method 3060A; rather than report data generated outside the holding time, ASC has reported the initial result obtained for this sample.

Hexavalent Chromium Quantitation - Laboratory Control Samples Three laboratory control samples were extracted with each batch of samples to identify the extraction efficiency and capacity of the extraction procedure to induce conversion of trivalent chromium to hexavalent chromium. The laboratory control samples spiked with an aqueous hexavalent chromium and a solid  $\text{PbCrO}_4$  standard produced acceptable recoveries for each batch (ranging from 93.4% to 107.4%), indicating that the applied method effectively extracts and stabilizes the hexavalent chromium species. The third laboratory control sample spiked with an aqueous trivalent chromium standard solution resulted in a hexavalent chromium recovery of less than 1.0% for each of the sample batches. The quantity of hexavalent chromium detected in these laboratory control samples is near that present in the associated preparation blanks, which is attributed to trace levels of hexavalent chromium in the reagents used for the extraction procedure. The low recoveries for the trivalent chromium spikes demonstrate that the extraction procedure, under ideal conditions, induces minimal conversion of trivalent to hexavalent chromium.

Hexavalent Chromium Quantitation – Matrix Spike / Matrix Spike Duplicates (MS/MSDs) Similar to the laboratory control samples, three discrete sets of matrix spikes were extracted with each batch to identify the interaction of the sample matrix with trivalent and hexavalent chromium. The performance of the matrix spikes can assist in identifying chemical interferences associated with the sample matrix and the applied extraction procedure.

Hexavalent Chromium Quantitation – Cr(III) MS/MSDs The hexavalent chromium recoveries associated with each aqueous trivalent chromium MS and MSD were less than 3%. These low trivalent chromium matrix spike recoveries confirm that the

extraction procedure induces minimal oxidation of trivalent chromium to hexavalent chromium in the spiked sample matrices.

The RPD associated with the MSD performed for each of the three sample batches was above the established control limit of 25% (71.4%, 93.1%, and 87.3%, respectively). These elevated RPDs are attributable to the fact that a minimal amount of the trivalent chromium spikes was converted to hexavalent chromium during the applied extraction procedure, as expected, resulting in hexavalent chromium concentrations that either were either less than ten times the RL (as is the case for batch 1) or represented an increase in Cr(VI) that was less than two times the ambient sample concentration (as is the case for batches 2 and 3). Since greater variability is expected as sample concentrations approach the RL and as spike concentrations approach the ambient sample concentrations, the elevated RPDs are identified as an inherent limitation of any quantitative method and do not impact the validity of the reported results.

*Hexavalent Chromium Quantitation – Aqueous Cr(VI) and Solid PbCrO<sub>4</sub> MS/MSDs*

The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14310 for batch 2 were within acceptance limits for both the aqueous (78.1% and 85.5%) and insoluble (90.6% and 91.2%) hexavalent chromium matrix spikes. These acceptable recoveries suggest that the applied method effectively extracts and stabilizes hexavalent chromium in this particular sample matrix.

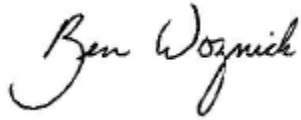
The hexavalent chromium recoveries associated with the insoluble Cr(VI) matrix spikes performed on the sample identified as AB14333 for batch 3 were within established control limits (85.0% and 81.6%), whereas the recoveries of the aqueous Cr(VI) matrix spikes performed on this sample were biased low (62.5% and 61.7%). As previously mentioned, the recoveries of both the aqueous and insoluble hexavalent chromium LCS were within acceptance limits for this batch (100.6% and 95.7%, respectively), demonstrating that the applied procedure both extracts and stabilizes Cr(VI) in solution. Since the low bias observed for these aqueous Cr(VI) matrix spikes may therefore be attributed to interference from the sample matrix, no further corrective action was deemed necessary. These MS/MSD results suggest that the matrix of AB14333 favors reduction of hexavalent chromium.

The hexavalent chromium recoveries associated with the matrix spikes performed on the sample identified as AB14289 for batch 1 were biased low for both the aqueous (0.0% and 0.8%) and the insoluble (67.4% and 68.4%) spikes. The recoveries of the aqueous and insoluble hexavalent chromium LCS were within acceptance limits for this batch (94.1% and 93.4%, respectively), again demonstrating that the method extracts and stabilizes Cr(VI) in solution. The low recoveries observed are therefore attributed to interference from the matrix of AB14289 and indicate that this sample strongly favors reduction of Cr(VI). Since all other quality control parameters associated with this batch were within control, no corrective action was deemed necessary.

The estimated method detection limit (eMDL) for hexavalent chromium for each batch of solids is generated using the standard deviation of the associated preparation blanks, in accordance with Applied Speciation and Consulting's SOP.

If you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Ben Wozniak". The signature is written in a cursive, flowing style.

Ben Wozniak  
Project Manager  
Applied Speciation and Consulting, LLC

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 4, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Sample Results**

<b>Sample ID</b>	<b>Batch Identifier</b>	<b>Date &amp; Time Analyzed for Cr(VI)*</b>	<b>Cr(VI) in mg/kg (dw)</b>	<b>% Solids</b>
AB14289	1	2/8/2010 18:34	< 0.014 U	97.4
AB14290	1	2/8/2010 19:26	0.022 J	99.6
AB14291	1	2/8/2010 19:32	0.019 J	96.0
AB14292	1	2/8/2010 20:03	0.069	88.4
AB14293	1	2/8/2010 20:09	< 0.014 U	96.3
AB14294	1	2/8/2010 20:19	0.063	99.4
AB14295	1	2/8/2010 20:24	0.163	99.5
AB14296	1	2/8/2010 20:30	0.061	99.6
AB14297	1	2/8/2010 20:35	0.066	99.7
AB14298	1	2/8/2010 20:40	0.319	97.7
AB14299	1	2/8/2010 20:46	0.035	98.8
AB14300	1	2/8/2010 20:51	0.025	99.4
AB14301	1	2/8/2010 21:07	0.293	99.2
AB14302	1	2/8/2010 21:12	0.106	98.6
AB14303	1	2/8/2010 21:17	0.111	95.2
AB14304	1	2/8/2010 21:23	0.053	95.5
AB14305	1	2/8/2010 21:33	0.069	93.7
AB14306	1	2/8/2010 21:38	0.052	95.1
AB14307	1	2/8/2010 21:44	0.068	95.1
AB14308	1	2/8/2010 21:49	0.116	96.6

dw = dry weight

\* Times reported in CST

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 4, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Sample Results**

<b>Sample ID</b>	<b>Batch Identifier</b>	<b>Date &amp; Time Analyzed for Cr(VI)*</b>	<b>Cr(VI) in mg/kg (dw)</b>	<b>% Solids</b>
AB14309	2	2/17/2010 14:14	0.098	96.9
AB14310	2	2/17/2010 14:20	0.211	98.2
AB14311	2	2/17/2010 15:23	0.277	93.9
AB14312	2	2/17/2010 16:00	0.217	96.4
AB14313	2	2/17/2010 16:07	0.081	98.1
AB14314	2	2/17/2010 16:13	0.094	97.9
AB14315	2	2/17/2010 16:19	0.086	94.6
AB14316	2	2/17/2010 16:25	0.078	97.1
AB14317	2	2/17/2010 16:32	0.484	94.9
AB14318	2	2/17/2010 16:38	0.118	96.7
AB14319	2	2/17/2010 16:50	0.763	96.1
AB14320	2	2/17/2010 16:57	0.195	94.2
AB14321	2	2/17/2010 17:15	0.180	95.6
AB14322	2	2/17/2010 17:22	0.059	98.6
AB14323	2	2/17/2010 17:28	0.108	89.7
AB14324	2	2/17/2010 17:34	0.076	93.2
AB14325	2	2/17/2010 17:40	0.076	93.5
AB14326	2	2/17/2010 17:47	0.071	94.3
AB14327	2	2/17/2010 17:59	0.057	98.0
AB14328	2	2/17/2010 18:05	0.054	97.7

dw = dry weight

\* Times reported in CST

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
Contact: Michael Stroh

Date: March 4, 2010  
Report Generated by: Ben Wozniak  
Applied Speciation and Consulting, LLC

**Sample Results**

<b>Sample ID</b>	<b>Batch Identifier</b>	<b>Date &amp; Time Analyzed for Cr(VI)*</b>	<b>Cr(VI) in mg/kg (dw)</b>	<b>% Solids</b>
AB14329	3	2/9/2010 20:14	0.106	96.8
AB14330	3	2/9/2010 20:19	0.061	98.2
AB14331	3	2/9/2010 20:24	0.156	99.1
AB14332	3	2/9/2010 20:40	0.117	93.4
AB14333	3	2/9/2010 20:45	0.087	97.6
AB14334	3	2/9/2010 21:27	0.049	95.1
AB14335	3	2/9/2010 21:43	0.042	96.6
AB14336	3	2/9/2010 21:49	0.058	95.1
AB14337	3	2/9/2010 21:54	0.036	97.1
AB14338	3	2/9/2010 21:59	0.054	96.1
AB14339	3	2/9/2010 22:04	0.139	98.9
AB14340	3	2/9/2010 22:10	0.206	99.1
AB14341	3	2/9/2010 22:15	0.220	94.2
AB14342	3	2/9/2010 22:20	0.192	97.5
AB14343	3	2/9/2010 22:26	0.098	98.4
AB14344	3	2/9/2010 22:31	0.115	94.0
AB14345	3	2/9/2010 22:47	0.100	98.8
AB14346	3	2/9/2010 22:57	0.057	98.9
AB14347	3	2/9/2010 23:03	0.093	97.8
AB14348	3	2/9/2010 23:08	0.116	97.2

dw = dry weight

\* Times reported in CST



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**Quality Control Summary - Preparation Blank Summary**

Analyte	Units	Batch	PBS1	PBS2	PBS3	PBS4	Mean	StdDev	eMDL	RL
Cr(VI)	mg/kg (dw)	1	0.010	0.020	0.012	0.016	0.015	0.004	0.013	0.025
Cr(VI)	mg/kg (dw)	2	0.021	0.023	0.022	0.020	0.022	0.001	0.004	0.025
Cr(VI)	mg/kg (dw)	3	0.015	0.019	0.015	0.015	0.016	0.002	0.006	0.025

eMDL = Estimated Method Detection Limit

RL = Reporting Limit

**Quality Control Summary - Laboratory Control Samples**

Analyte	Units	Batch	LCS	True Value	Result	Recovery
Cr(VI)	mg/kg (dw)	1	LCS	5.000	4.706	94.1
Cr(III)	mg/kg (dw)	1	LCS	5.000	0.020	0.4
PbCrO <sub>4</sub>	mg/kg (dw)	1	LCS	6886	6430	93.4
Cr(VI)	mg/kg (dw)	2	LCS	5.000	5.369	107.4
Cr(III)	mg/kg (dw)	2	LCS	5.000	0.045	0.9
PbCrO <sub>4</sub>	mg/kg (dw)	2	LCS	6532	6791	104.0
Cr(VI)	mg/kg (dw)	3	LCS	5.000	5.029	100.6
Cr(III)	mg/kg (dw)	3	LCS	5.000	0.023	0.5
PbCrO <sub>4</sub>	mg/kg (dw)	3	LCS	6113	5851	95.7

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
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**Quality Control Summary - Matrix Duplicate**

Analyte	Units	Batch	Sample ID	Rep 1	Rep 2	Mean	RPD
% Solids	%	1	AB14289	97.38	97.55	97.46	0.2
% Solids	%	1	AB14307	95.13	95.19	95.16	0.1
Cr(VI)	mg/kg (dw)	1	AB14293	< 0.014 U	< 0.014 U	NC	NC
Cr(VI)	mg/kg (dw)	1	AB14304	0.053	0.043	0.048	20.4
Cr(VI)	mg/kg (dw)	1	AB14289	< 0.014 U	< 0.014 U	NC	NC
% Solids	%	2	AB14327	98.05	98.20	98.13	0.2
Cr(VI)	mg/kg (dw)	2	AB14318	0.118	0.144	0.131	20.2
Cr(VI)	mg/kg (dw)	2	AB14326	0.071	0.066	0.068	8.1
Cr(VI)	mg/kg (dw)	2	AB14310	0.211	0.158	0.184	28.7*
Cr(VI)	mg/kg (dw)	3	AB14345	0.100	0.081	0.090	21.6
% Solids	%	3	AB14347	97.84	97.87	97.86	0.0
Cr(VI)	mg/kg (dw)	3	AB14333	0.087	0.088	0.088	1.3

NC = Value was not calculated due to one or more concentrations below the eMDL

\* The RPD is above the established control limit of 25%; please see narrative.

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
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Applied Speciation and Consulting, LLC

**Quality Control Summary - Matrix Spike/ Matrix Spike Duplicate**

Analyte	Units	Batch	Sample ID	Spike Conc	MS Result	Recovery	Spike Conc	MSD Result	Recovery	RPD
Cr(III)	mg/kg (dw)	1	AB14289	5.192	0.032	0.6	5.234	0.015	0.3	71.4**
Cr(VI)	mg/kg (dw)	1	AB14289	5.243	< 0.014 U	0.0*	5.147	0.039	0.8*	NC
PbCrO <sub>4</sub>	mg/kg (dw)	1	AB14289	6810	4589	67.4*	7578	5181	68.4*	1.4
Cr(III)	mg/kg (dw)	2	AB14310	4.923	0.212	0.6	5.058	0.262	1.5	93.1**
Cr(VI)	mg/kg (dw)	2	AB14310	5.007	4.098	78.1	4.779	4.272	85.5	9.0
PbCrO <sub>4</sub>	mg/kg (dw)	2	AB14310	6683	6058	90.6	6280	5725	91.2	0.6
Cr(III)	mg/kg (dw)	3	AB14333	5.105	0.144	1.1	5.117	0.231	2.8	87.3**
Cr(VI)	mg/kg (dw)	3	AB14333	5.064	3.253	62.5*	5.134	3.254	61.7*	1.3
PbCrO <sub>4</sub>	mg/kg (dw)	3	AB14333	7865	6689	85.0	7675	6265	81.6	4.1

\* The recovery is below the established control limit of 75%; please see narrative.

\*\* The RPD is above the established control limit of 25%; please see narrative.

NC = Value was not calculated due to one or more concentrations below the eMDL

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
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**Quality Control Summary - Historical Calibration Standards**

<b>Cr(VI) True Value</b>	<b>Cr(VI) Measured Result</b>	<b>Percent Recovery</b>
0.050	0.053	106.7
0.050	0.056	112.3
0.050	0.067	134.5
0.050	0.052	103.6
0.500	0.501	100.2
5.000	4.929	98.6
25.00	24.24	96.9
0.050	0.057	114.7
0.050	0.056	112.0
0.050	0.060	120.6
0.050	0.064	127.8
0.500	0.499	99.7
5.000	5.055	101.1
25.00	24.98	99.9
0.050	0.068	135.5
0.050	0.066	132.2
0.050	0.060	119.9
0.050	0.069	137.7
0.500	0.537	107.4
5.000	4.935	98.7
25.00	24.89	99.6

All results are reported in µg/L

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
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**Quality Control Summary - Historical CCV Standards**

<b>Cr(VI) True Value</b>	<b>Cr(VI) Measured Result</b>	<b>Percent Recovery</b>
5.000	5.179	103.6
5.000	5.177	103.5
5.000	5.458	109.2
5.000	5.673	113.5
5.000	5.220	104.4
5.000	5.560	111.2
5.000	4.301	86.0
5.000	5.018	100.4
5.000	4.981	99.6
5.000	5.127	102.5
5.000	4.998	100.0
5.000	5.089	101.8
5.000	5.384	107.7
5.000	5.417	108.3
5.000	5.479	109.6
5.000	5.533	110.7
5.000	4.322	86.4
5.000	4.973	99.5
5.000	5.084	101.7
5.000	5.144	102.9

CCV = Continuing Calibration Verification

All results are reported in µg/L

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
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**Quality Control Summary - Historical Second Source Standards**

<b>Cr(VI) True Value</b>	<b>Cr(VI) Measured Result</b>	<b>Percent Recovery</b>
20.00	19.73	98.7
20.00	20.04	100.2
200.0	204.6	102.3
4.000	3.795	94.9
200.0	218.7	109.4
202.0	214.0	105.9
10.00	12.09	120.9
5.000	5.495	109.9
5.000	5.107	102.1
100.0	95.38	95.4
5.000	4.932	98.6
5.000	4.706	94.1
20.00	20.30	101.5
5.000	5.029	100.6
100.0	107.2	107.2
5.000	5.369	107.4
5.000	5.557	111.1
5.000	4.986	99.7

Second source standard = Cr(VI) Blank Spike (from 3060A Extraction)

All results are reported in mg/kg

Hexavalent Chromium Results for the Missouri Department of Natural Resources  
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**Quality Control Summary - Historical Matrix Spikes**

Ambient Cr(VI) Conc.	MS Spike Conc.	MS	MS Recovery	MSD Spike Conc.	MSD	MSD Recovery	RPD
		Measured Result			Measured Result		
0.003	18.72	0.126	0.7	19.48	0.125	0.6	5.1
131.4	40.07	179.8	120.9	38.99	164.2	84.1	35.9
0.070	18.83	0.214	0.8	18.42	1.851	9.7	170.7
1.351	163.9	162.5	98.3	266.7	282.0	105.2	6.8
3.647	4.009	6.202	63.7	4.061	6.469	69.5	8.7
2.961	221.2	257.4	115.0	209.2	216.7	102.1	11.9
2.853	150.2	167.7	109.8	226.2	243.7	106.4	3.1
0.118	43.67	44.23	101.0	54.70	53.27	97.2	3.9
0.077	4.976	3.343	65.6	5.124	3.790	72.5	9.9
126.8	867.7	947.6	94.6	765.2	834.1	92.4	2.3
0.187	4.046	3.095	71.9	3.775	2.961	73.5	2.2
0.160	4.017	4.214	100.9	4.078	4.038	95.1	5.9
0.080	3.906	3.657	91.6	3.959	3.600	88.9	2.9
0.101	5.052	3.646	70.2	4.694	3.300	68.2	2.9
0.224	4.910	2.551	47.4	4.893	2.361	43.7	8.2
0.342	4.885	3.534	65.4	4.820	3.424	63.9	2.2
< 0.014 U	5.243	< 0.014 U	0.0	5.147	0.039	0.8	200.0
1.816	20.46	6.685	23.8	20.39	5.832	19.7	18.8
0.088	5.064	3.253	62.5	5.134	3.254	61.7	1.3
0.184	5.007	4.098	78.1	4.779	4.272	85.5	9.0

All results are reported in mg/kg